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November

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"SHE CAN'T PLAY A NOTE"

"This'll be Funny" they shouted as she sat down to play — *but a minute later...*

"I GUESS we're sunk right here in the club for the afternoon," sighed Jane, as the rain began coming down in torrents.

"I suppose this means more bridge, and I'm tired of that," said John Thompson. "Can't we find something unusual to do?"

"Well, here comes Sally Barrow. She might offer some solution to the problem," suggested Jimmy Parsons, with a laugh.

Poor Sally! Unfortunately she was considerably overweight. Nevertheless the boys all liked Sally—she was so jolly and full of fun.

"Hello everybody," came Sally's cheery greeting. "What's new?"

"That's just it, Sally, we've just about reached the end of our rope," replied John.

"Would it surprise you if I played a tune or two for you on the piano?"

"You play, Sally? Don't be funny!" The very idea of Sally having talent in any direction struck everybody as a joke. Sally was good-natured though. She didn't mind being laughed at—as long as John Thompson didn't join in the laughter. Sally liked John—more than she cared to admit.

Sally walked nonchalantly over to the piano. Carelessly, she played a few chords. At this, everyone suddenly stopped laughing and turned to watch Sally. Then just as if she had been playing for years, Sally broke into the latest Broadway hit. Her listeners couldn't believe their ears! Sally continued to play one lively tune after another. Some danced while others gathered around the piano and sang.

Finally she finished and rose from the piano. John Thompson was at her side immediately brimming over with curiosity.

"Where did you learn? Who was your teacher?" John asked.

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You get discouraged. You begin to feel that fate is AGAINST you. You complain secretly about your ill luck. Perhaps you hide your shortcomings behind a whole flock of easy EXCUSES.

But the hard, cold world doesn't care about you.

You've got to look out for YOURSELF.

Time alone cannot help you. If it could, EVERY man over 70 would be rich.

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VOLUME 2 No. 6

WONDER Stories

NOVEMBER 1930

. . . . Prophetic Fiction is the Mother of Scientific Fact . . . .

HUGO GERNSBACK, *Editor-in-Chief*
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THE WONDERS OF FLIGHT

By HUGO GERNSBACK

IN a recent issue of *Popular Aviation*, a rather well-known writer, John B. Rathbun, author of a number of well-known technical books, contributes an informative technical article entitled "500 Miles per Hour Can't Be Done." He then goes to great length to show why it is impossible or impracticable even to attain such a speed. By means of intricate mathematics, diagrams and otherwise, he shows us that, at ordinary flying speeds of 100 m.p.h., the heat due to air friction is hardly noticeable; but, at 500 m.p.h., when the air resistance is increased about 900 times, he proves, mathematically, *the airplane will melt*. All of this he figures for an altitude of 5,000 feet above sea level.

Incidentally, the author finds that to travel through the air at 500 m.p.h. demands an increase of power to approximately 960 times that required at 100 m.p.h., or the use of a power-plant of 96,000 horsepower (the article states 960,000 horsepower, which is evidently a misprint). From all this, the author comes to the conclusion that flying at 500 m.p.h. is practically impossible.

It is all inexpressibly sad, and very disappointing for the future of aviation. And the saddest part about the article is that the facts as stated are true.

Some sixty or seventy years ago, a well-known mathematician proved that it is quite impossible to build a building higher than six hundred feet, or thereabouts. If we should go higher than this, the pressure on the bottom bricks would become so great that the building would collapse; because the bricks can not support the weight piled on top. Consequently, it is impossible to build a building higher than 600 feet—which is quite true.

Many such examples could be cited of historic calculations of the impossibility of this or that. All of these predictions are usually based upon the lack of imagination of the well-meaning, but poorly-informed "prophet". For instance, the man who made the calculation of the limitations of a brick building was quite correct. Of course, he could not imagine that we would today have buildings over 1,000 feet high, and will probably have them soon at 2,000 feet. But then, again, he could possibly not imagine steel buildings, which support the weight easily, and the steel skeleton of which, incidentally, holds up the brick or stone work as well.

The same criticism must be made of Mr. Rathbun's article. It may be doubtful that an airplane can be built to fly at a rate of 500 m.p.h. at an altitude of 5,000 feet.

But why, and for what reason, we would wish to fly an airplane at 500 m.p.h. at an altitude of 5,000 feet, the author of the article naively leaves out entirely. It would be just as silly for a pilot of a flying-boat to expect it to move on the surface of the water at 200 m.p.h., on its pontoons; it simply can't be done. In order to make the higher speed, *the seaplane must move into a less dense medium;* namely, the atmosphere.

Exactly so with the airplane of the future. No sane man will try to fly at 500 m.p.h. at sea level, or even at 5,000 feet; he will make a steep climb up into the rarefied atmosphere for, maybe, some 25,000 feet, or even beyond that; and here such slow speeds as 500 m.p.h. will be laughable. Speeds of 1,000 m.p.h. will be reached during the next 25 years and, if Mr. Rathbun lives so long, he will see it done. Of course, at 1,000 m.p.h. no airplane of present-day type can be used. Nor can we think of flying so fast at even 25,000 feet altitude; we will probably have to be up about anywhere from 60 to 100 miles, where the air resistance is practically nil.

An airplane propeller will of course be totally useless at this altitude, and the plane will have to be propelled by rocket-power, which is already coming into use. Airplanes, by the way, have already flown with this power, in Germany. Curiously enough, we will not require any 96,000 horsepower. As a matter of fact, to fly 1,000 m.p.h. at the high altitude we will probably require *less* power than we do today to move the same weight through the lower atmosphere at 300 m.p.h. We will see airplanes or kindred machines reach a speed far beyond even 1,000 m.p.h.; and even 2,000 m.p.h. will be attained by the present generation.

All of which proves that a little knowledge is sometimes a dangerous thing.

The Time Annihilator

by

Edgar A. Manley & Walter Thode

(Illustration by Paul)

There we stood, adrift in time, facing Chang Hsu, his visage distorted with hatred.

LARRY STENSON yawned as he slumped into an overstuffed chair and picked up a newspaper from the table of his library. His appearance startled me. His face was ashen and black smudges, that told of sleepless nights, were under his pale blue eyes.

Bert Clay turned from the library window and crossed the room toward Stenson. "Are you going to have our little game of bridge tonight, Larry?" he asked, lighting a cigarette.

"Not tonight, Bert, old man," Stenson replied, crumpling the newspaper impatiently and flinging the sheets into the fireplace: "Fact is, I'm feeling mighty rotten."

Clay glanced at me and his red-thatched head moved almost imperceptibly. His very thoughts seemed written on his freckled countenance. He was worried over Stenson, fearing a nervous breakdown; almost pitifully eager to lure the young scientist into a few hours' relaxation at cards.

"Just one little game, Larry," I pleaded.

The atmosphere of the library seemed surcharged with dread, a spectral presence that could not be confined by time nor space. I often thought of that presentiment, in the days that followed, when time was annihilated, when the domed-headed men of Pei stalked on their mission of destruction.

That night we three were on the threshold of the most devastating adventure that mortal ever faced. Stenson, indeed, had already passed through the curtain of the future, crossing as casually into the future as one might walk from one room to another. We were to learn of his time journey a little later, told in faltering words.

I suppose, recalling that night, that two more prosaic men than Bert Clay and I were not to be found in New York City. Clay was a lawyer, cynically scornful of all fantastic conceptions. He was as practical a fellow as ever battled words in the criminal courts of the city.

As for myself, I had been on newspapers in New York for ten years. This experience, I can truthfully assert, made me walk close to the ground, dubious of all things that could not be defined by rule of thumb or hard logic.

Larry Stenson, our golf and bridge companion for five years, was of the same age as Clay and me, in the early thirties. He was regarded as one of the outstanding young men of the science department of Columbia University. There was nothing pedantic about Stenson; ordinarily his light sense of humor cheered the more gloomy Clay and myself.

But tonight Stenson sat brooding in his chair, puffing nervously on his cigarette. After an interminable silence he leaped to his feet and walked toward Clay, placing his hand on the lawyer's shoulder. His wide generous mouth twitched apologetically. "I hope I haven't seemed grouchy tonight, fellows," he muttered.

"Forget it, Larry," I remarked. "Guess

HERE is one of the most unusual time travelling stories that we have read. There are many stories of wanderers thru space, struggles in space and tragedies in space. Yet if we are to conceive as time as independent of space we can visualize struggles in time and a real drama taking place across the deserts of time.

We have purposely allowed our time travellers to become known to the people of the eras that they visit, for in this way the great drama of the story becomes apparent. But one lesson our story does teach—and it is that, if our theory of the future existing side by side with the present and past is correct, we cannot change that future by one iota. No matter how we strain against and battle against the events of some future era, we cannot alter them the least bit. They are written indelibly in the book of fate. All we can change is the present.

We are sure that this story will provoke a perfect storm of fresh and invigorating discussion.

you've been trying to revolutionize science."

Stenson smiled, rather bleakly.

"What would you say if I told you I had?" he queried.

"Three cheers for our side!" chuckled Clay. "What have you solved now?"

"The problem of time and space!"

"Lane, we've got a rising young Einstein in our midst," said Clay, turning to me. "See that he gets three columns on the front page."

"And how! Let us in on the big secret, Larry!"

We were all on our feet now, laughing rather foolishly, I fancy. Clay was slapping Stenson on the back, as if to drive away the gloom that possessed the man. Stenson's face, etched against the light, shocked me. He seemed to have aged a score of years since we had seen him the night before.

"Don't slap his back like that, you chump!" I cried to Clay, angrily. Then to Stenson: "For the love of Mike, what ails you, man?"

WALTER THODE

EDGAR A. MANLEY

"The machine—the machine I invented," he remarked. "Maybe you'll say I'm crazy, Lane, but I projected myself hundreds of years into the future this morning!"

Clay stared at me incredulously over Stenson's shoulder and I know my face must have revealed baffled amazement. I was convinced Stenson was raving. "Larry, old man, sit down, please," I begged. "You must have been under some tremendous strain. Tell us—"

"I have told you, you pair of blithering fools! I can see by your silly face you think I've lost my mind, Lane. I've been working on this—for years. Secretly!"

He sagged into his chair, burying his face in his hands. Dry sobs shook his strong body and I winced and turned toward the windows. The lights of New York below gleamed like fireflies,—mile after mile. I bit my lower lip. There was something lashing in hearing a man sob.

The Room of Mystery

"I WENT—hundreds of years!" he babbled brokenly. "Sights of horror everywhere! The world—gone!"

Clay hurried toward me, leaving the crushed man alone.

"He ought to be sent to a hospital," he muttered. "Poor ol' Larry. I never thought—"

"Shut up, he'll hear you!"

"What the dickens will we do?"

"He's been overworked. I have noticed this coming on for weeks. I told him he needed sleep. The poor devil's been cutting down on sleep until his nerves are shot. Don't irritate him!"

Stenson walked toward us, his eyes flashing angrily.

"Talking about me, eh? Listen, I know you were. Cut it out. Think I'm batty, eh? I'll prove it. How would you both like a trip?"

"A trip?" I asked. "Where to—Europe? I'm too broke!"

"No, not to Europe. The greatest trip any man ever took. It got me—lack of sleep and worry for weeks past. I've solved it. I've annihilated time and it don't mean anything! It's like an accordion that can be folded or dragged out. There's a unity to

time that links the past, present and future. All our conceptions of time will go by the board!"

There was something fascinating about the flow of words that leaped from his lips and I marveled at the rapid transformation in the man. He was an enthusiast, so immersed in his strange fetish that all else was forgotten. He soared at a bound to the heights.

"Listen, Lane, and you too, Bert! Did you ever stop to think that if one lived on a planet whirling about the giant sun Betelgeuse, and could stare through a telescope at events upon this litle earth of ours, he would see the French Revolution being enacted? Light waves sweep the universe. When we stare into the sky at night we really see light that has been speeding for countless years across the ether toward us!"

"We're listening, Larry," I remarked. "Go on."

"I have followed out this theory, but in another sphere of thought. Existence is like a mirror that reflects everything. Perhaps I can explain my idea more clearly by recalling the old adage that 'Coming events cast their shadows before.' The future is already in existence. Time is a river that flows endlessly back and forth, sweeping the universe in its tide!"

Stenson led us across the richly carpeted library toward his laboratory. He switched on a light and pointed with stubby forefinger at a group of electric generators in the corner. Coils of wires, repellent like slumbering reptiles, lay about the generators. I had never been in his laboratory before, despite my friendship with him. There were depths of secrecy about the man, I perceived, that no one had ever really plumbed.

Another door turned and I whistled in astonishment. In this room was the strangest looking box I had ever gazed upon. Mounted on wheels, the walls were of glass, so were the floor and ceiling. A faint light pierced this box of mystery and I shivered involuntarily. Even the phlegmatic Clay was impressed, I noted, as I glanced into his heavy face. The ashen whiteness had departed from Stenson's countenance and a healthy flush returned almost miraculously.

"An odd room, eh, fellows?" Stenson asked as he led us into the box. "Couldn't you easily imagine anything happening here?"

"A swell place for a murder, I'll say!" snorted Clay.

"I'll say it would be an ideal place for a murder," responded Larry Stenson. "There would be no *corpus delicti* to worry about. Once in this chamber, with the time annihilation machine grinding through the centuries, no detective on earth could solve the problem!"

"You seemed on edge just a few moments ago, Larry," I said. "Now you seem cheery as blazes. How come?"

"Nerves gave out on me from lack of rest, Lane. You've felt that way yourself, haven't you? I guess that silly sobbing I've done cleared the atmosphere for me!"

"What a little hermitage you've got here!" exclaimed Clay peering into the semmingly endless expanse of mirrors. As my eyes grew accustomed to the peculiar light I followed Clay's staring eyes.

THERE was something weirdly unreal about the chamber. I seemed to look into illimitable distances. Indistinct forms of creatures and cities merged crazily into each other in the glass. I rubbed my eyes, feeling I was bewitched.

"I guess I'm feeling the spell of the place, Larry. Say, what the devil—"

"What you see are merely visual survivals that have clung to the mirrors! Sort of the same principle as retention of vision to the retina of the eye when a light goes out."

"Now, you want to go to sleep and rest up for a week straight, Larry," counseled Clay kindly.

"Can't seem to knock off any rest. I just toss about in bed."

"I'll go out to the drug store and get some dope that'll knock you for a goal," I remarked. "I'll be back in five minutes."

I hurried from the apartment and a minute later was speeding downward in the elevator, immersed in thought. I had known Larry Stenson too long, and had too great an admiration for his intelligence, to doubt that he had made an astounding discovery. Possibly he had stumbled on a widened television that could project the beholder about the world. I was convinced, however, that he was entirely wrong about projection into the future. Nearly a week without sleep—one could hardly call his few off minutes of rest such—had played queer pranks with Stenson. I was sure of it.

I bought a sleeping potion at the drug store on the corner and pushed my way through the throngs on Madison avenue. It felt good to be alive that warm, Summer night in the year 1945. I thought of the marvels through which I had lived. Only two months before I had crossed the Atlantic on an air liner in 18 hours. The human voice spanned the world now instantaneously. It was a world at peace, a joyous, prosperous globe.

Again I was back in the apartment. "Where's the patient, Bert?" I demanded laughingly. "Where's that sick scientist of ours who just needs a few real hours sleep?"

"Gone! Great Scott—he's gone!"

"Quit spoofing me, Bert. Try that on your silly juries. Where is he?"

I stared at Bert Clay apprehensively. His jaw sagged and he tried vainly to light a cigarette. His hand trembled so violently the match went out. He uttered an oath and flung the cigarette on the floor. I seized his arm violently.

"Where's Larry gone to?"

Clay stared at me foolishly, his gray eyes wavering. "Damned if I can figure it out!" he said brokenly. "I left him in that accursed glass box for a few moments. He slammed the door. I got a glass of water and then returned. There was a buzzing sound from inside and I know he must have turned the switch. I fought like a madman to open the door, but I couldn't budge it! I heard voices inside! A bedlam of voices. I was crazy with fear, old man, and I want you to know I'm not a coward!"

"Voices?"

"Yes, speaking in strange languages. Laughing, hyena voices. They sounded inhuman. Then I thought I heard a voice rising higher than the rest. Sounded strangely like a Chink's voice!"

"Well, where did they come from? There was no one else in the apartment after I left."

"No, they were in that accursed cabinet. The buzzing sound kept up. For a while I thought of smashing the batteries in the corner of the other room—the outer part of the laboratory."

"Damned good thing you didn't or you'd have probably marooned him somewhere about the year 2,500!"

I marveled that I could have spoken so about the unwritten future—or was it really unwritten? Now I know that the future was a book, a tremendous volume, written indelibly from the Morning of Creation.

"He was in there—I could hear his voice and I tried to break down the door with a chair. I heard Larry shout out."

"What did he say?"

"He cried, 'Bert, for God's sake don't!' His voice seemed a million miles away!"

"And then?"

"The buzzing of the batteries stopped. The door opened as easy as pie under my hand. I stared into the box—then I entered. 'Larry!' I yelled. But there was no answer."

"Holy Smoke! Where was he?"

"Gone! I told you when you came in he was gone!"

CHAPTER II

Plunged Into Time!

I suppose my face must have appeared extremely stupid. Certainly Clay's sagging lips would have aroused gales of laughter under ordinary circumstances. But neither of us felt in a mood to laugh. Horror clutched our hearts. The curtain of time had parted, swallowing Larry Stenson in the vague mist of eternity.

"Let's both look at that damned contrivance, Bert," I cried. "This is unbelievable.

How could he have vanished like that?"

"I don't know, old man—but he did."

Clay nodded bleakly and rubbed his chin in agitation. "He was such a prince of a fellow," he muttered. "Could he have gone through the walls?"

We were at the open door of the time chamber now, staring into the half dark recess like frightened children. The laboratory lights outside illuminated a sector of this strange room of illusions, cutting a path of flame into the stygian darkness.

"The room holds the future," I said in an awed whisper.

Clay, growling angrily, shoved me aside and stumbled into the time chamber. I walked into the box at his heels, panting in agitation. I was in a blue funk of fear, which my face undoubtedly revealed. Hesitatingly I made my way to the walls and placed my hands on the glass, seeking vainly for some hidden recess into which Stenson could have vanished.

Blurred faces peered mockingly at me—or so I fancied. They were long faces, with narrowed eyes and distorted bodies—but human in their general appearance. And yet there was something hellishly inhuman about them that baffled me. The glass gave way beneath my hands as if I were pressing into soft rubber. The sound of faroff voices whispered in my ears.

"Bert—this glass. It doesn't seem to have any end!"

"No, I noticed that, Lane. Damned if it doesn't seem bewitched."

I walked a step closer until my body pressed against the mirrors. Clay shouted warningly. "Don't do that, Lane. You'll go right through."

"What kind of glass is this made of?" I demanded.

"You got me, Lane. This is the oddest place I've ever been in since I was born."

"There is only one thing left for us to do. We must start after poor Stenson. I hope it isn't too late to save him."

"I'm afraid he's dead now."

We glanced about the room of glass, with its hint of distances beyond human concept. The chamber could not have been more than five feet square; and yet the illusion of space, as illimitable as the universe of a billion suns, encompassed us in everlasting arms. I seemed suspended in space, living through the births and lives and deaths of all human beings. There was a cosmic depth to the time machine that seemed to touch every conceivable dimension. I wondered if I were enthralled in a nightmare from which I would presently awake, trembling with weariness.

"Here are a bunch of dials," remarked Clay, rousing me from my reverie. "I'm getting the creeps in this place, Lane."

I studied the dials in the tiny container as I stared over his broad shoulders. Minute markings, numerals that stood for almost endless years, were engraved on the dial. The indicator pointed to the year 1945. I studied the dial and perceived that a scratch had been made at 2250, as if intentionally by some sharp instrument. I pointed out the scratch to Clay.

The unknown spread before us, enticing in its very terror; the future beckoned us with the bony fingers of Death. I slammed the door as Clay pressed on the indicator. We were off into time and space.

A faint humming sound, strangely like that of a swarm of honey bees, filled the time chamber and we felt ourselves hurled into space with inconceivable violence. A succession of scenes, fleeting as those of dreams, and myriad voices projected themselves into our consciousness. I laid my hand on Clay's arm, seeking the reassurance of his very presence.

The mirror walls of the time vehicle seemed to melt away as did the glass floor. Only the indicator, with its numerals spelling away the cycle of years, possessed reality for us. We moved at tremendous speed into the future; and yet the sense of time seemed extremely vague. Time seemed to vanish into nothingness, leaving only the mad sensation of rushing, rushing breathlessly into we knew not what.

We stared into eternity with bewilderment as we moved through many lands and eras. We mingled for fragments of time in the midst of multitudes abiding in towering cities; again we were out in the ether of space—at least so it seemed. The time

journey seemingly described a great arc, a mysterious parabolic curve that to my mind has remained the very essence of the linking of past, present and future into a perfect unity.

TIME was condensed into a microcosm in the chamber. I hesitate now to call the strange vehicle by such a name. Surely it could not be described in all its attributes by such a word. As we wandered through streets of the cities yet to come we were part of the passing throngs. And yet while we saw them, they were utterly oblivious of our presence. The walls of the time machine were penetrated by these human beings, changeless in type from those living today but strangely garbed in flowing robes. Their passing bodies touched those of Clay and me, but were less dense than the faintest vapor. All was unreal but Clay and me. Clay stared at the indicator that was carrying us resistlessly into the future.

"Don't let that dial out of your sight," he said. "If you do, you're going to be stranded hundreds of years beyond your time."

"Or thousands."

"That's what happened I believe to Stenson."

I pointed to the scratch on the indicator board at the year 2250. "I wonder if that was made by Stenson? Perhaps it was put there in the hope we would see it and trace him."

"But how did the time machine return? It's funny that it could do it of its own accord."

"Yes, but this is the strangest machine I believe the world has ever seen. Neither you nor I, Clay, know anything about it."

The mounting time dial pointed to the year 2132. We found ourselves in a great boulevard with the indicator floating before our eyes. Tropical trees rose before the white buildings and the holiday crowds—for such they seemed—passed laughingly about us. They were attired in robes of the gayest hues. I envied them their carefree life. Their cheeks blossomed with glowing health. Great airships floated overhead and music floated on the breeze.

Clay and I found ourselves floating a trifle above the ground after a brief period of walking through the multitudes. Either the indicator had halted, leaving us at rest in a city that must have been the home of many millions, or time had for a period stretched to gigantic dimensions for us. The buildings towered two thousand feet high.

Again I stared at the indicator and found it climbing. We were hurried through time, the scene fading from our eyes. The journey reminded me of a motion picture projected on a screen at such tremendous speed that everything turned into a blue blur.

"How in the dickens can I stop this machine?" asked Clay testily.

The problem was a baffling one. A series of little ivory handles, the uses of which were utterly unknown to us, hung on the indicator box. There was more than a faint possibility that if we touched the wrong handle we faced annihilation. We passed the year 2250—marked by the momentous scratch—with swirling rapidity. I scratched my head in bewilderment.

"She's rising away up in the twenty-hundreds now, Clay," I remarked. "We better put a halt to this trip."

Utter terror clutched my heart as I stared at the rising indicator. The consequences of our time journey were impressed with appalling force on my brain. Clay was ashen-faced. His hands moved with uncertainty along the row of handles.

"I'm going to see what happens," said Clay touching one of the handles.

He pressed down on the knob and the time machine fluttered as if swept by a gale. We were shaken violently against the invisible walls. The indicator came to a sharp halt, pointing to the number 2418. A feeling of incredulity swept me. "Does that mean we're actually in the year 2418—or are we victims of a hoax?" I demanded.

"We're in 2418 or dreaming nightmares."

WE were in a desert, a vast plain of shifting sand. A group of buildings, crumbling ruins, lay half-buried a few hun-

dred yards before us. Silence shrouded us and I saw Clay clutch his throat in a gesture of despair. Stouthearted Bert Clay was a man of vaunting courage, but the bleak misery of our situation preyed on his mind now. Indeed, while I attempted to cheer him, I could not help but reflect on the problems that confronted us. How were we ever to return to our own time?

The glass door floated before us, and the miracle chamber walls, but the laboratory had vanished into the vacuum of eternity. Save for the illusory walls, we were castaways in a trackless wilderness of sand.

"We're done for, Bert, if we ever lose track of that dial," I warned.

"I'm afraid we're done for anyway."

"Keep a stiff upper lip."

He smiled. Good old Bert Clay. I knew as I watched the smile sweep his rugged face that I could not have found a finer or truer companion for such an adventure. "Take a look, Lane, I'm grinning like a Cheshire cat."

I was now examining a few other dials and levers in the mysterious room. One struck me as being similar to the "stick" of a 1930 airplane.

"What's this?" I asked.

Clay shook his head. "I dunno."

"Well, we can't lose much by finding out," I said philosophically, and suiting action to words, I shoved the stick forward. Immediately the glass box began to roll forward on its wheels, with us comfortably within.

Clay sprang forward and looked out incredulously. "We're moving!"

"Certainly," I exclaimed beaming. "This is a time-o-mobile. Where do you want to go—"

We approached the low-lying structures, which seemed to hint at ravaged centuries, and old memories flooded my mind. Two memorable and oft-recalled years of my youth had been spent in Tibet with a scientific expedition sent out by the American Museum of Natural History. I represented a newspaper syndicate on that golden venture, reporting the finding of dinosaur skeletons and their stupendous eggs. The structures in the sand resembled nothing so much on earth as the temples of lamas who dominated the forbidding inner country of Asia in 1930.

I wondered as I stared out at the ruined structures, how we had come to find ourselves in the heart of Asia. The buildings covered a surprising ground area, at least ten acres, and were of mud-brick construction. Their pagoda towers were in various stages of collapse. I stopped the machine by pulling the stick back.

"Hey, anybody around?" Clay shouted, opening the door.

Only the hot wind of the desert answered him—a mocking echo. We closed the door and again moved on, shading our eyes with cupped hands against the blinding sunlight. Apparently the region about the lamasary was deserted. I pondered on the ruin that desolated the landscape. Probably hundreds of years had passed since the prayers of lama monks rose to heaven from these ancient walls.

My thoughts wandered as I struggled to patch together the events that had taken place since our talk with Larry Stenson that night. The amazing series of catastrophes and jagged events pierced my brain. I speculated on the possible fate that had befallen Stenson and how it came about that he had lost control of the indicator that annihilated time so marvelously.

Cold fear bore down upon me as I realized that possibly a like fate awaited Clay and me. We might be marooned in the far future, unable ever to return to our own time and generation. Beads of sweat stood out on my forehead.

Time swirled about us like a cyclone, a black cloud tearing violently across the horizon of humanity, sweeping all before its horrible path. Time was all powerful and weak as a baby. Time exterminated all and was in turn swallowed and eaten in the teeth of a dragon. Madly fantastic thoughts clawed through my overwhelmed mind. I pictured Clay and myself suspended in a void of eternity, hanging on capricious winds between heaven and earth like the tomb of Mohammed. We were petty creatures in a dream world of misty unreality.

"Suppose I try and turn the dial back again?" said Clay.

"No, I'm afraid we'll jam the works. We've had marvelous luck so far."

"You call it luck?"

'Well, we haven't been exterminated so far. The machine is the most devilish contrivance ever devised. Let us study it a while before taking any other moves."

"Just as you say. But I'm afraid we're going to starve to death in this desert."

"And we haven't eaten—for thousands of years."

"Yes, but we lived through these years almost instantaneously. At least I can't figure out how long the lapse was."

"Let's quit philosophizing."

CHAPTER III

A Strange Conversation

AS I spoke a shadow swept across the desert and the sunlight was temporarily blotted out as if by an eclipse. We glanced toward the sky and saw a gigantic body, nearly a quarter of a mile square, hurtling through the air with the rapidity of an express train. Accustomed as we were, in 1945, to the sight of Zeppelins and other huge aircraft, we could not restrain exclamations of astonishment. The tremendous bulk darted toward the desert sand, slowing its speed and settling without a jar a few hundred yards away.

"Well I'll be hanged!" exclaimed Clay. "What was that?"

"It looks like a great building. Must be made of mighty light material."

"It's a palace of some sort. Look at the walls how they gleam in the sunlight. They seem to be covered with gems."

A gate of the sky palace opened and three beings emerged. They were much larger than the human species, with monstrous heads and long arms that reached to their knees. We fled in our machine across the desert lashed by terror. The three gigantic beings, however, quite evidently failed to perceive us. We were evidently invisible to them.

"Funny they don't chase us," panted Clay. "We'd be in a tough way if they did. They must be at least nine feet tall. Can't you see, Bert, we're invisible men to them? We don't really exist to them at all while we're in our machine."

"In other words we're just like spirits?"

"That's it exactly. We really have no existence to people living in the year 2418. Don't you remember how we mixed with crowds in the cities we passed through? They didn't see us either."

"And these men can't see us, unless we get out of our machine. Mighty strange situation."

This thought caused me to mull over a further possibility. I wondered what combination of circumstances we would encounter in the event that a double flow of time, backward as well as into the future, should reveal our presence to these strangely inhuman creatures of the time to come. I halted abruptly and turned to Clay.

"Let's take a closer look at them," I said. "We're safe if they can't see us."

The three beings hovering about the portal of the airship palace seemed posted as a guard. The time annihilation machine moved on as we approached the gate.

The three guards were clad in robes of silk. They did not glance at us as we drew near. All lurking fear on the score of discovery vanished and Clay and I were filled with supreme confidence. We studied the trio and were astonished at their stature. The skin of their faces was like leather and their eyes as narrow and cruel as those of serpents. The great mouths seemed like those of reptiles, but the foreheads were dome-shaped. Despite their resemblance to humanity, we were convinced that they were not of the races that had dominated the globe during our era. A new race possessed the globe.

I recalled Stenson's remark in the library on the destruction of human civilization. Now I realized he had stumbled on knowledge hidden to all the generations that had preceded him. The dominance of the earth by humanity had been held inevitable. Now other creatures had wrested the control from mankind.

Had these creatures wiped the human race off the globe, or did beings kindred to ourselves still exist in serfdom? I thought of

the time voyages of Larry Stenson and wondered where he had vanished. Somewhere in the long scale of time he had toppled into a yawning abyss.

Perhaps some current of my unspoken thoughts were carried to the brains of the dome-headed men before us. Despite their great dissimilarity to humanity I thought of them as men, through want of a more fitting word. Possibly they were evolved from the parent human stock, changing their appearance through the course of many centuries.

They spoke and I was astonished further to find that their language bore marked resemblance to the tongue of Thibet, with which I had familiarized myself during my two years in that land.

"Here is the land wherein the great Chang Hsu created us," said the tallest man.

"How interesting are these pilgrimages in our floating palaces to Pei."

"And of Chang Hsu, what gratitude we owe him. He raised us up into power in this land of Pei, hidden for many centuries from the outer world by towering mountains."

"Until our race became powerful enough to crush humanity. How few of them survive today, and they are our slaves."

"Blessed be the memory of Chang Hsu."

All nodded reverently at the mention of Chang Hsu. The great heads hinted at profound intelligence, godlike in comparison with that of humanity. Clay drew nearer and whispered in my ear, questioning me as to my apparent interest in the conversation; but I motioned him to be silent. I felt I was on the verge of a startling discovery.

THE torrid desert sun beat down upon our shelter and my tongue grew swollen from thirst. I was weak from hunger. I wondered where we could find water and food. The three gigantic beings of Pei, the hidden land, stood rigidly before us.

"Did not Chang Hsu, who crushed humanity, declare that the land of Pei was to be ever sacred, O Slan Cho?" remarked one of the guards to the gigantic leader.

The question was put, not as an interrogation but as an affirmation of faith. Slan Cho nodded his repulsive head with the air of a religious leader listening to the litany of a devotee. He waved his tenuous arms in the sultry air. "So Chang Hsu ordered," he replied.

"After the power of Chang Hsu brought about the destruction of most of the human race, did not our forebears spread about the globe taking over many lands, Slan Cho?"

"Yes, Chang Hsu left us the rays of death. As we grew strong in numbers, here in the desolate land of Pei, we plotted the destruction of the worm-men who called themselves human."

The litany, for so it was, proceeded amid a strange religious spell. Slan Cho repeatedly nodded his head, with its reptile features.

"It was the wish of Chang Hsu that humanity be deprived of its rule over the globe," said Slan Cho. "He hated his own species, white, yellow and black. Such as remain alive today are miserable slaves."

"It is a privilege indeed to come with the pilgrims to the tomb of Chang Hsu."

THE sound of many voices came from within the gate of the floating palace and the three men guarding the portal drew back. A multitude of gigantic beings emerged, clad in silken garbs of many colors. Conical hats covered their heads. Clay and I were engulfed as the pilgrims swarmed about us. I shouted warningly and turned to the control stick to flee.

The faces of the pilgrims were impassive. The leather skin appeared horrible in the sharp light. Clay touched me on the arm. The column of pilgrims started across the desert. If anything was needed to convince me that we were among beings of the future, the utter disregard with which they marched about it was it.

Their great forms mingled with ours and passed through us as if we existed on different planes.

"This is the strangest experience of all," said Clay.

"And the most interesting. I wonder if Stenson ever had a similar experience?"

"Poor Stenson."

The procession, composed of hundreds of the leather-skinned beings moved toward the crumbling ruins. At the rear of the column, carried on a golden throne, was a being even greater in stature than the others. Cries arose from the throats of the marching pilgrims.

"Hail to the khan, viceroy of the ruler of the Eastern World," the pilgrims shouted.

Moving the chamber with the procession I stared at the reptile-face of the being on the throne. The resemblance to a serpent was rather far-fetched, I cogitated, for the domed head was undoubtedly that of a human type. But the wide lips in a jutting jaw hinted at the crawling order of creation. The narrow-lidded eyes were like those of serpents, vicious and inhumanly cunning.

The throne was carried on the shoulders of a dozen panting human beings, clad in dark robes. A sharp cry burst from my lips at the sight. There was something heart-rending in the sight of the enslavement of our own species. The relatively few human beings still existing were crushed into adject slavery. A guard of nearly a score of domed-headed men surrounded the slaves and I watched two humans lashed cruelly as they faltered under their heavy burden.

"I'd like to kill the khan," I shouted.

"Who? The chap on the throne?"

"Yes."

"You seem to have got quite a drift on the events taking place."

"I did. The language is somewhat like that of Thibet."

The robes of the khan were of cloth of gold, encrusted with precious gems. As I neared the throne I stared back at the floating palace. The secret of levitation must have been developed to a remarkable degree by these people, I reflected. Even if the material which composed the air palace was light as aluminum, the projection of such a great bulk through the sky was a startling achievement. But no doubt if a being of the year 1800 could have witnessed the flight of a Zeppelin he would have been struck with greater bewilderment.

"Well Lane, where are we bound for?"

"This group is making a pilgrimage to the tomb of Chang Hsu who apparently developed their species."

I hastily sketched the conversation I had overheard from the guardians of the air palace gate and he whistled in surprise. "Lucky thing you remembered a little of the lingo," he remarked grimly. "At least we'll be able to know a little of where we're at."

"Maybe. And we might run into some wild surprises, too."

THE desert was flushed by the last rays of the sun and the beams touched the walls of the lama monastery. The ruins seemed poignant with a tale of resistless time. There was something tragic in the inevitable destruction that faced all things. The evil spirit of Chang Hsu brooded over the desert, although he had been dead for centuries.

The hundreds of pilgrims, as we neared the ruins, gave way before the throne of the khan, viceroy of the mysterious ruler of the Eastern World. I stared into a great cavern, of immense proportions, the walls of which were of solid rock. The cavern was below the level of the monastery. Entering, we saw another being of human form entombed at the far end. The form was motionless and I realized, with startled heart, that I was staring at the dead body of the Malevolent Chang Hsu, to remain here for eternity.

The thin form of the scourge of humanity was seated on a golden throne about which stood a guard of fifty of the breed he had evoked. An everlasting guard, I realized, protected the underground tomb. The passing centuries had but slightly marred the cruel face, with its wisp of black mustache. The body was attired in yellow robes.

There was something strangely human, indeed, about this desert pilgrimage. I recalled events of my own day. As a child I had been taken to the tomb of Washington at Mount Vernon. My heart had thrilled as I stood at the resting place of the Father of our Country. The domed-headed beings had come to this desert cavern impelled by

similar motives. Truly there must have been some sentiment about these strange creatures to have honored the memory of the man who had evolved their species.

The pilgrims, led by the khan, prostrated themselves before the dead body, striking their great foreheads on the stone floor. They groveled in the dust. I stared at the body, fascinated by the high forehead that hinted of superior intelligence. My mind dwelt on the talk I had heard between the guards at the palace portal of a death ray left as a heritage by Chang Hsu to the strange brood with which he had crushed the world.

"That is the devil that ravaged the human race," I said pointing to the body on the golden throne.

The next instant I regretted my words. Bert Clay was hot tempered under certain situations. All caution seemed to desert him now. A shout of rage burst from his lips as he flung open the door and hurled himself toward the embalmed body as if determined to topple it from the throne. Lights blazed about the shrine, blinding in their intensity. The tomb was illuminated by some invisible means.

I shouted a warning to Clay. A sense of tragedy swept me as I noted a misty slime enshroud him.

CHAPTER IV

Trapped in Time!

"CLAY, for heaven's sake, stop!"

"I'm going to smash—"

Cold horror filled my soul as I darted after him, attempting to seize him before he would be seen. He was only a few feet away from me. A gust of chilly air, a breeze fitting for a tomb, swept about us as he darted like a madman toward the golden throne.

"Clay, you blithering idiot, come back."

He turned on me with a blazing face. Shouts arose about us and I glanced into the towering forms of hundreds of pilgrims. They leaped from their prone positions on the floor of the tomb and advanced toward us. A chill of cold fear touched me as I sensed that they saw us now that we had emerged from the protective invisibility of the time machine. The folly of Clay was reaping a swift reprisal.

"We're done for Lane," he cried. "Oh, what a fool I've been."

"This is the end, I guess."

"We'll fight it out," he shouted. "Better be killed that way!"

I knew that we had severed every link that bound us to our own time. My mind swept back to New York, with its robust life. Now I would never see my own time again. We were trapped. Doubtless Stenson had committed a similar *faux pas*, forgetful of the fact that only by remaining in the glass-bound time chamber could he hope to return to the present.

"They are humans," excited voices shouted.

Arms circled Clay and me with brutal force. Clay turned toward me, his face bloodless. The arms about my body and throat exerted strangling pressure. I battled ferociously to free myself, but the struggle was hopeless. The khan stood before us, staring into my face. At first he was incredulous and then I could *feel* a great intelligence working over this strange phenomenon.

"You have solved the problem of time and space," he said at last. "I know you are not of the human slaves that still live on earth. You have come from out of the past. Well, we shall see what to do with you."

The ability of this man to understand immediately how we got here rather startled me. These fellows were intellectual giants!

Heavily guarded by a score of the khan's warriors, led by the redoubtable Slan Cho, we were conducted toward the flying palace. I turned to Slan Cho, overwhelmed with curiosity. "What makes the palace fly?" I inquired.

Strangely enough Slan Cho condescended to answer my question. There was a boastful note in his voice, I noted with an inward smile, as if a man of the vanished twentieth century had been asked by a survivor of the year 1200 how it was possible to fly in an airplane.

"We have discovered the secrets of nature to a degree far beyond that ever at

tained by the human race," he said. "We have merely nullified the operation of gravity. A force known as *apergy* neutralizes gravitation. The result is that almost instantaneously we can project great masses of material through the air. It is an ocean of travel to us."

Clay was depressed with worry as we approached the gate of the air palace. The structure I noted idly was composed of fretwork of gold and silver, richly encrusted with great jewels with which I was unfamiliar. Clay turned to me. "Sorry I was such a fool, Lane," he said.

"Forget it."

By some peculiar mental quirk I had ceased, at least for the time being, to have any great apprehension. After all, had I lived out my allotted span of life, I would have been dust these many hundreds of years. I was cheating death, in a sense, by being alive at all. And then I recalled that as far as I knew the year 1945 still existed somewhere in eternity.

I became strangely baffled as I pondered over this anomaly. An overpowering melancholy struck my heart as I recalled that Clay and I were so wonderfully alive in the year 2418 against all the harsh logic of nature that kills every being that breathes.

Reaching the portal of the flying palace we entered a courtyard and then passed through a richly curtained door. Heavy incense greeted our nostrils, sickeningly sweet. I felt crushed by the power that had woven itself about Clay and me. A corridor spread before us, unbroken for at least 100 yards, upon the walls of which hung precious tapestries, depicting what appeared to be historical events in the lives of the gigantic race with the domed-heads.

AS I walked down the hall I studied the tapestries with great curiosity. The vivid story of the destruction of the human race was depicted. A graphic tale of overwhelmed cities and crushed nations was emblazoned on the tapestries. At the end of the hallway Slan Cho halted us with upraised hands.

"You will fall on your faces when you enter," ordered Slan Cho. "That is the way all approach the mighty khan, viceroy of the ruler of the Eastern World."

We stood at the threshhold of the throne room and I stared through the portal, with eyes wide and startled. The khan sat on a peacock-hued throne, garbed in his gleaming robe of jewels. A crown adorned his huge head. Below him, on the golden floor, were the prostrated forms of his courtiers, their arms clumsily spread at their sides. They resembled obscene beetles in this posture. The khan's voice rose and five of the courtiers crawled, like waterbugs, toward the door.

The waiting warriors who formed our guard motioned to Clay and me, then flung themselves in humble prostrate postures. I bit my lip tightly, humiliated but curious to see what lay before us. Clay muttered rebelliously, but quailed when I caught his eyes. "You've stirred up enough trouble," I growled.

"I guess I have."

The floor of the throne room was embossed with diamonds and huge emeralds. Here was wealth undreamed of in our time. Even the mansions of the wealthiest of our era were never such lavish splendor. I glanced upward at the khan, an impassive, regal figure on his throne. The huge head was erect, surveying the humbled courtiers. He seemed like an Oriental monarch of unlimited power.

The courtiers, followed by Clay, myself and our guard, moved swiftly toward the throne. Never in my life had I gazed upon such magnificence. Soft light melted through windows of gorgeous colors despite the fact that the sun had long since vanished below the horizon. The richest of tapestries hung on jeweled walls. They depicted, like those in the hall, the crimson history of the breed of Pei.

"I will question you creatures of the past," said the khan as we reached the foot of the throne of eighteen steps.

An ominous hush fell on the assemblage and I felt a premonition of unleashed cruelty. Somehow I could not help but view Clay and myself as two little mice in the claws of a multitude of great cats. A strange fancy.

The khan's eyes gleamed like the jeweled optics of a cobra, venomously implacable. His mouth jutted forward like that of a serpent. He seemed far less human than any of his courtiers as his great arms waved rhythmically in the cold air of the palace. The chill grew intense and I realized that we were high in the air, floating toward an unguessed destination.

"You came into our midst from out of the long dead past," the khan pursued thoughtfully, "through a means we never considered possible for you human beings. Perhaps we underestimated your intelligence. You created a time machine which carried your bodies invisibly through time and space. We realized that when you appeared so unexpectedly in our sacred tomb."

"Yes, but the spell was broken there," I remarked. "And where is the time machine?"

"It has vanished. Strangely enough we were unable to find a trace of it in the tomb."

"It vanished!" I exclaimed. "Surely it—"

"It was taken while you were being made captives," the khan remarked slowly. "A human being was seen to dart across the cavern toward the machine. He vanished into nothingness. I know now that he was swallowed up in the time machine. When my subjects closed in on the space where the time machine had stood they were unable to touch this man. He had ceased to exist as far as they were concerned."

THE interrogation of my activities by the khan I perceived was in the nature of leading questions. There was a profound shrewdness in this method of attack. He merely played his hand with sublime cleverness, informing me of events that had taken place and waiting for me to entrap myself. And, after all, there was little of which I could inform him. He should have known that the machine was non-existent both to sight and touch of everything outside of it.

He had spoken of a man vanishing into the time machine. My thoughts swept back to the journey of Larry Stenson and his startling disappearance. There was little doubt in my mind that Stenson was the man who had leaped into the time machine in the tomb of Chang Hsu.

"The man—was he your companion?" the khan asked.

"I cannot tell," I replied. "What did he look like?"

"He was a man of middle age, extremely thin and wearing a purple robe."

"He was not the companion we had sought."

"And you know of the construction of the time machine?"

"I know nothing of its mechanical nature."

As the khan went on to question us about how we got here, I pondered. Stenson could not have been the man who had plunged into the time machine. He was not of middle age and was of sturdy build. Besides I could not picture Stenson in a flowing purple robe. Some interloper had seized the machine. The dim recesses of the cavern had hidden a man of mind scientific enough to realize that a time machine had carried us into the tomb; and courageous enough to have seized the chamber to effect an escape. But the question was—Did the man who entered it leave our time with it or was he still in the cavern invisible and impalpable?

Who was this third man? I wracked my brains over this problem. How did he come to enter into the calculations? The problem was beyond my power to solve. If Stenson had hidden in the tomb, and seized the time machine, we might hope for escape. But as far as I knew Stenson might have been lost in the year 5000. I wondered for a time how the time machine, after his disappearance, could have swept back to 1945. There was only one plausible solution for this. The year 1945 represented a "deadline" for the machine. Released of its own accord it would follow the physical law that probably governed such matters and returned to its original condition—back in Stenson's laboratory.

Finally the khan ceased to question us and stared at us, his jeweled robe aflame with light reflected from the walls, a means of illumination that surpassed the crude electric system of our own time. The khan spoke at last:

"I can learn nothing from you," he said indifferently. "It is my order that you both be destroyed. Only death can disperse you to your proper condition!"

CHAPTER V

A Timely Interloper

A FACE and shoulders, apparently disembodied, appeared suddenly before me; and an arm motioned beckoningly. The apparition was startling, causing gooseflesh to rise on my body. Again the arm motioned impatiently and I leaped to my feet, shouting to Clay. The realization that the time machine, operated by the strange interloper, was in the throne room of the floating palace, dawned on me like a flash of lightning.

"Clay, come on!" I yelled.

My companion darted toward the spectral head and arms, shouting defiantly as a group of the domed-headed monsters leaped to detain us. There was no doubt in my mind that they had glanced up and seen the head.

I did not take two steps toward the invisible time machine, with its beckoning pilot, before detaining hands seized me. The arm vanished within the time machine and the face of the stranger, a gray-haired man, was clouded with a very evident look of horror. Then the face vanished too.

A horde of the khan's courtiers closed about the spot where the time machine had stood, their heavy bodies surging about the golden floor, but they met absolutely none of the resistance that would have been encountered if a solid had occupied the space.

A shout of disappointment burst from my lips at the realization that Clay and I had missed rescue by a fraction of a second. The events of the late afternoon and evening surged rapidly through my mind. I was certain that through some mishap Clay had shut off the motivating power of the time machine just before his mad dash through the door. And I knew that this very fact had converted the time travel machine into a substantial reality for the man of 2418 who had obtained possession of it.

Whoever the time interloper was, he had attempted to rescue us. He had stuck his head and right arm through the door, striving to attract our attention. The fact that the time machine had been in action at the time resulted in the rest of his body being invisible. And now, I was convinced, the time machine had swept away. Again; we were lost!

"Kill them at once," the khan ordered. "They must not escape."

The philosophic ruler, who had so suavely discussed time travel with me only a few moments before, had become a cruel despot. There was no use in pleading for him to spare us. I knew that nothing could move him. Possibly fear of ruin, through the agency of the strange time machine, impelled him to have us destroyed without delay.

Then I recalled the pitiful human slaves of these monsters of the future. A vision of the struggling men in humble black, panting under the weight of the golden throne that bore the khan to the tomb of Chang Hsu, burned into my brain. It would be better to die—a thousand times preferable—than to be a slave under these tyrannical monsters.

A group of human serfs, guarded by warriors, wheeled a strange looking altar into the throne room. Two of the men were white and the other six were evidently Orientals. But all wore the look of crushed dogs. I thought for a time of appealing to them to join Clay and me in a struggle. If we could kill the khan and start a revolt there might be a faint chance of ultimate victory. It was a mad thought. There could not have been a chance in a million, I realize now, of winning against such overwhelming odds. And the slaves were too terrified of their masters to revolt.

THE altar was circular, its platform standing about six feet from the floor. Near the edge we saw a circle of small tube-like objects, each resting on a groove that ran radially to the center of the altar. What strange death did they have in store for us now? We knew that whatever it might be, it would be in keeping with the cruelty depicted on the faces of these beings. It would be some slow lingering torturous death.

Roughly we were lifted to the altar and placed in the center surrounded by the circle of strange tubes.

All eyes were turned toward the Khan. With an imperial gesture he raised a hand and then dropped it swiftly. At once from the tubes there issued strange sheets of flame-like vapor that reaching out hungrily toward each other formed gradually a wall about five feet high and surrounding us. Strange to say, there was little heat from the wall of flame. Instead I was concious of a slight drowsiness and a prickly feeling over my body.

I am no scientist, yet I felt at this moment that here was some ultra-modern torture device, that could provide for the spectators a scene of the utmost agony in his victim.

I looked at Clay. On his face too there was depicted a look of mingled amazement, horror and weariness (as tho he were trying to fight off some terrifying power over his brain.) Now I saw what was in store for us. Slowly the tubes were moving on the grooves toward us, the circle of flame slowly contracting. A new impulse was entering my brain a desire to throw myself into the flames. I looked at Clay and gripped his arm. "Is it getting you too?" I whispered huskily.

"Yes." his voice was low, horrified. He had hardly control of it.

"Hold on to me," I whispered. We gripped each other's arms, as slowly, oh! so slowly that circle of death contracted toward us. Thru a haze I saw the leering faces of the creatures outside and the cool indifferent gaze of the Khan. Madness struck me then, I guess. I raised my fists toward that merciless figure, shouting, screaming, raging. A buzzing was filling my head, the desire to throw myself into the flame was becoming overwhelming, and by the increasing pressure of Clay's arm on mine, I knew he was giving way too. It was a matter of minutes, perhaps seconds. . .

Then suddenly just beyond the wall of narrowing flame, I saw the face of that old man again. His torso was projected toward us out of nothingness. He motioned to us, and then slowly approached us.

Consternation broke out among the dome-shaped creatures. At a command from the Khan they rushed toward us. The old man reached us not a moment too soon. We felt his helping arm about us, I saw the familiar walls of the time machine.

Clay at my side was in a state of collapse. His clothing was half burned from his body and his hands and face scorched. I knew that I was equally as marked. The stranger, gray-haired and blue-eyed, laid his hand reassuringly on my arm. He wore a purple tunic, badly ripped.

"It is all right," he said in English. "You are safe now."

The forms of the domed-headed men moved upon us, but the stranger laughed. He pressed down the controls of the time machine and we felt ourselves being swept resistlessly into the current of time. The indicator started to drop rapidly and we curved along the parabolic course, back toward our own era.

Many minutes passed in silence.

"And who the devil are you?" demanded Clay finally.

"A perfectly reasonable question," the other laughed, "coming especially from a generation that included that of my great grandparents. I am Professor Alexis Halden of Europolis, the capital of the United States of Europe. And my era is that of 2045."

"And how did you come to fit into this particular adventure," pursued Clay, rather truculently. "It seemed a mighty funny story that you tell."

"It certainly is," said Halden. "Perhaps I can enlighten you on some phases of it. To begin with I met your friend, Mr. Stenson, when his time machine invaded my laboratory at the University of Europolis. You can imagine my astonishment, gentlemen, when Mr. Stenson appeared before me. Never before had I seen a man attired as he was. He seemed to have stepped out of the air.

"And where is Stenson now?" I demanded.

"He is back in the year 2250—the period of the blackest tragedy of history. But please, gentlemen, let me continue. I want to make my story coherent."

"And you will pardon our interruptions, I hope," said Clay in a quiet tone.

"And let us thank you for saving us," I said. "But please continue."

CHAPTER VI

A Chase Thru Time

PROFESSOR Halden cleared his throat rather primly, like a teacher about to lecture on science. I smiled, forgetting my raw wounds in contemplation of our new acquaintance. But his serious face checked me and my lips grew sombre.

"I will make my explanation rather short, my friends," said Halden. "You can readily imagine my utter astonishment when Mr. Stenson appeared. The doors of my laboratory were locked. While I had heard, of course, of time machine theories, the possibility of their being actually used for a voyage through time had never struck me. Mr. Stenson told me he had just stepped out of a time machine, having been attracted by my laboratory as he sped on his marvelous journey."

"Yes, I see."

"We're all ears, professor."

Halden smiled. "To make my story short, Mr. Stenson invited me to accompany him on his journey. This caprice of your friend at first startled me. Really I have always been a timid soul, gentlemen, but the marvelous possibilities of journeying into the future struck me as worth any risk. I accepted the invitation.

"And then the trouble started?" I laughed.

"Indeed, yes. I will not bore you with details, except to say that we reached the year 2418, to which you in turn had journeyed, and I decided to leave the time machine the better to explore conditions existing at that period. Mr. Stenson said he would go to the period of 2250 in order to learn about the tragic destruction of humanity occuring in that year."

"And you left the time machine?" asked Clay incredulously.

"Yes, I very foolishly did. And I suppose by doing so I let loose all sorts of complications. Because I can plainly see that Mr. Stenson must have left the time machine himself at 2250, but inadvertently failed to safeguard the machine against a journey of its own accord back to its starting point."

"He left a scratch on the indicator at 2250," I remarked.

"So I've observed," said the Savant. "Doubtless, he realized that in leaving it, with none in the machine, that the machine might became unmanageable—returning as I've said to its original point."

"You mean the machinery or mechanics of the thing went wild or something?" I inquired.

"Something like that. I really can't say. But I'm convinced you'll find Mr. Stenson at 2250. That is unless some catastrophe has befallen him."

"But how was it that I came to stop this machine at the year 2418?" said Clay nonplussed.

"You understand, of course, that the time machine describes a parabolic course in time. It would be an error to assume that it moves—if I might use such terms—in lateral as well as horizontal planes at one and the same time. No, Mr. Stenson explained it to me. He said the machine follows an undeviating line."

"But I can't understand how I came to stop at 2418, just as you and Stenson had done before," said Clay. "I was at the controls and just picked out that particular date offhand."

"There is such a thing as thought waves," said Halden with a slow smile. "When you stopped at the year 2418, near the very spot of the tomb of Chang Hsu, you merely followed out an old law of telepathy. You stopped—because somewhere along the line of travel, subconsciously of course, you obeyed that law. The thought of making your destination there was too impelling to be resisted."

"And you waited in the tomb?"

"Yes, I was in hiding there. I nearly was captured twice by the guards, but I eluded them. I waited there for the machine to come for me. Now I know, from the fact that you are here instead of Mr. Stenson, that something has befallen him. See, I have set the indicator for the year 2250. That was where he said he would be. The course of the machine will bring us over

the same path he traveled. If he is still alive I am sure we can save him."

"I'm glad you've got some track of him," I said. "We would have been lost in the hunt. Imagine looking over half of eternity for any one."

Again the panorama of passing years swept past. We saw cities of marble, rising like mountain peaks, with gigantic aircraft winging overhead. Again we had brief glimpses of the dome-headed men of Pei whose labors had changed the climate of the globe and reared an industrial civilization surpassing anything we had ever seen in the twentieth century.

"Where did these creatures come from?" asked Clay.

"I do not know," said Halden gravely. "There is a mystery about their origin that is baffling."

WE huddled together in the whirling time-girdling machine, cutting through the year as a ship's prow breasts surging waves. I could not help but think of the years as waves, beating in endless succession on the sands of eternity. They wore all away before them with pitiless attrition. Time seemed to eat all with dragon jaws.

"We are the creatures, the playtoys of time," said Halden.

"It just juggles us about and casts us aside," remarked Clay.

The year 2250 loomed before us. Never had a single year been so filled with catastrophe for humanity. We were hovering above a world of ruins. Below us, drawing nearer, was New York.

New York, with buildings crumbling, swept into nothingness, was a city in the midst of despair. From the roof of a building that soared a third of a mile into the air, where the time machine had landed, we watched throngs of refugees pour through the streets far below, lashed into frenzy of fear by the tragedy that engulfed them. We descended to the streets.

For a few moments I studied the great metropolis of the future, spellbound by its immensity. Buildings rose above us, 2,500 feet into the air with ground bases that covered thousands of square feet. Aerial roadways wound amid these huge structures and fleets of airships sped through the wind seeking safety from the cloud of doom.

The unbelievable had happened. Doomsday had come to humanity and death laid leprous hands on millions throughout the world.

Flames leaped into the sky, adding to the destruction carried on the wind by invisible death rays. We knew that the brood of domed-headed men, brought into being by Chang Hsu, were starting their career of destruction, the fruition of which we had seen in the year 2418.

I stared at the scene before me in horror, realizing I was gazing upon the supreme tragedy in the history of the world. Before my eyes a city of at least 25,000,000 people was being laid waste. We mingled invisible in the streets amid scurrying throngs. Moving sidewalks were filled with men, women and children, clad in brilliant silk robes, who passed us unseeing. Cries of despair arose on all sides.

"This is dreadful," said Professor Halden. "It is an awful sight."

"We must find Stenson," I cried.

"The airships have all gone," a heavy set man shouted.

He was at my side, barely three feet away, and I turned to ask him where they had gone; but my voice failed to reach him out of the cycle of time that separated us, confined as we were by the machine's walls.

A woman was at his right, her beautiful face torn with fear. Two little children trailed at her skirts, clinging to her as if for protection. They were without doubt a father, mother and their brood.

"Do you think Stenson is still here, professor?" asked Clay.

"I cannot say. But he told me he would be in New York in the middle of May, year 2250."

"It will be impossible to find him, I'm afraid," I remarked as our machine moved through the crowds. The passing multitudes swept at our side, utterly oblivious of our presence. They moved like astral shadows. The strangeness of our position troubled me. If we left the confines of the time machine, abandoning the anomalous invisibility that confined us, we would share

their dangers, be of them in their period of tribulation.

That was what Stenson had done. The adventurous heart of the young scientist had prompted him to desert the confines of the machine—only to have it swept away back to 1945. He was stranded on the vague shore of the future.

We walked for perhaps a mile down a wide boulevard. Palm trees rose in majestic splendor and I marveled at their presence. There was no smoke in this New York of the future; indeed the air had a tropical aroma that caused me to believe that a change in the Gulf Stream, brought about possibly by human ingenuity, had given the metropolis a climate such as Florida had enjoyed during the early part of the twentieth century.

Destruction

I QUESTIONED Professor Halden on this point and he nodded.

"Yes, that is exactly what has taken place," he said. "But it came about through natural causes. Even in my own era, in 2045, the Gulf Stream had changed so that New York was converted into a semi-tropical city. The condition has brought about all these changes of verdure which doubtless seem astonishing to you men from more than a hundred years before my period."

Passing through a wide side street, blooming with gorgeous flowers along a parkway in the center, we came to a great square. This open space was the scene of wild pandemonium. As we crossed the square, which was adorned with marble statuary, we ran into currents of humanity in terrified flight.

"There is a vast park over there," said Halden. "Let us go there."

"Look—quick!"

Clay seized my arm and pointed. A great building was in the process of destruction. The annihilating waves touched the structure and it vanished rapidly. A cloud of dust rose in the air. Terrible cries arose from the stampeded multitude.

"The domed-headed devils are wrecking civilization," I cried. "Is there no way to stop all this horror, professor?"

"I'm afraid we are utterly powerless. We saw the future holds when we were in the year 2418. Here we are less than two hundred years before the epoch we visited in Pei. We are gazing into inevitable consequences."

We reached the park and found ourselves amid magnificent palms and flowers of all the hues of the rainbow. I abandoned hope of ever finding Stenson. Doubt filled my mind that he still survived. We reached a boulevard that bisected the park and saw round machines, that bore a faint resemblance to automobiles, moving about on the ground. Struggling throngs were fighting to get into these vehicles. Two of the machines shot vertically into the air and sped into the sky. They were little airships.

I watched a group of men attack a third machine, hurling two women, a man and three children into the street. The women and children screamed and their male escort battled with his fists. But the group that had seized the machine were brutal in their determination to retain possession. The thin veneer of civilization which surrounded these beings of the future, was swept away in the struggle for existence. The attackers leaped into the air machine and rose into the faint breeze.

But if cowardice played its part in this tragedy that shook the world, there was glorious heroism. Three young men turned over their air machine to the ejected party. A glow of admiration shone in Halden's eyes.

"Look," he said, "they are going afoot. They have surrendered their chance to live."

The pavements and sidewalks moved swiftly beneath our machine, and we realized that the people of 2250 had developed an ease of life incomparably beyond the crude era of 1945. As we crossed the park we watched the white, frightened faces of the refugees. They live in my memory yet as visions of a nightmare. They were our own people, descendants of the early Americans of our own day.

Again the time machine rose to a high building and I glanced at the golden sunlight. The day was like other days since time immemorial in its general aspects. A clear, almost cloudless sky, blue and bene-

volent, spread above us. But invisible death rained out of the sky upon a people who had long abolished war and poverty. Humanity at the peak of its glory was doomed.

My memory swept to the scenes in the desert of Pei where the three domed men had guarded the floating palace. I recalled their conversation. The words had sunk deep into my memory:

"After the electric air rays invented by Chang Hsu brought about the destruction of most of the human race, did not our forebears spread about the globe taking over many lands?"

So, one of the guardians of the gate had asked Slan Cho. And I recalled Slan Cho's answer:

"Yes, Chang Hsu left us the rays of death. As we grew strong in numbers, here in the desolate land of Pei, we plotted the destruction of the earthmen who called themselves human."

The guardians of the flying palace had spoken of events that took place centuries before their own time. Now we were gazing into these tragic happenings. We had seen the cause long after observing the effect.

CHAPTER VII

The Hunt for Stenson

"TELL me, old man," whispered Clay, turning to me, "am I dreaming some terrible nightmare?"

"No, I'm afraid we're only too wide awake."

"The refugees are heading out toward open country, poor devils. And there is only room in the time machine for one other person. If we find Stenson we'll be crowded. If we could only save a few of those unfortunate people."

"What a happy city to have lived in. Look at the great parks. The Jersey side must be a continuation of New York City. Just look at the towering skyscrapers across the Hudson."

I followed his finger and nodded. Then I peered down the street.

"They will have to go many miles before the city ends. I suppose it covers all of Westchester county by now."

"It will be like looking through a haystack for a needle to find Larry," I said.

"Let us stay here for a few moments," said Professor Halden, "and think of a logical course to follow in finding him. I was too hopeful when I said we could track him easily. I'm very much afraid."

"The death of an individual is sad," remarked Clay, "but it is inevitable. This mass destruction is hideous."

Halden shook his head in agreement. "That is the horror of what we are gazing upon—mass destruction. We must all die when our allotted span of time comes. But do we not feel that we survive in those that come after us?"

"Look, the city is being annihilated rapidly now!" shouted Clay. "Why, it's melting away before our very eyes. The devils are pushing their destruction furiously."

A mass of buildings, that must have covered a half square mile, was caught in the path of death rays, projected for all we knew from half way across the globe. Where solid masonry had stood, towering into the blue sky, became nothing but emptiness. The buildings crumbled into the thinnest of dust.

We stared into the street and saw hundreds of fleeing persons trapped in another invisible ray. The pavement was torn up. Where hordes of human beings had stood was now nothing but desolation. I pressed my hands before my eyes to shut out this sight. I wondered if Stenson had met a similar fate.

"Is there no chance, if we return to the 'present' of forestalling all this horror?" Clay cried pleadingly.

"You mean to our own time?" I rejoined. "I doubt it. We are looking upon the inevitable. We can no more lift our finger to prevent all this than if we never existed."

"Come, let us push our search for Mr. Stenson," cried Halden. "I'm very much afraid we are lax. We have wasted much time up here fruitlessly."

We were down in a boulevard again fighting our way through the crowds. Building after building fell before the invisible rays projected by the domed-headed men.

"We can warn the world of this when we return," said Clay.

"Yes we might do that when we return to 1945—or Professor Halden when he finds himself back in 2045. But we'd be laughed at as madmen. Just like we regarded Stenson when he collapsed that night. And hundreds of years will pass before all this transpires. It will be forgotten for innumerable decades before the end comes. We'll have been dead and crumbled into ashes before this takes place."

"What an amazing experience we've had, Lane."

"The world is being swept into nothingness. The rays of extermination that Chang Hsu invented are turning everything into dust."

Two buildings, barely a quarter of a mile away, were caught in the unseen cone of destruction. They vanished before our eyes. Clay turned to me:

"Did you hear that man that just passed say that London and Paris have been half destroyed."

"And my home, Europolis," said Halden in agitation. "The beautiful capital of the United States of Europe. It, too, is being swept away."

"Look, there goes another building, Clay," I yelled. "It must be nearly a half mile high. It's the most startling structure I've ever seen. Look quick!"

"And the two buildings adjoining it!"

THE sharp outlines of the three mountainous buildings, through which aerial highways swept, eighty stories in the air, appeared against the Southern sky. We saw a spiral of dust whip the hot air from the tallest building, and fainter columns arose from the other structures. The sky was acquiring a reddish glint from the clouds of dust and darkness, artificial and terrifying, fell upon the city.

The sky was clear of airships now. The twenty-five million denizens of the metropolis were in flight afoot and on swift vessels sweeping up the Hudson river.

We neared the park again and moved aimlessly amid the serried rows of gigantic palms. Here and there great holes appeared in the ground and we realized that these spots had been visited by the fury of the electrical air rays. The park was deserted now, save for hundreds of dead. Many had been trampled to death. The refugees were moving northward.

A marble building, the roof of which was supported by Gothic columns, stood near a lake and we moved toward the structure, What guided our course toward the building has since been a profound mystery to me. Possibly a hunch caused us to advance in that direction.

A bleeding form emerged from amid the pillars, clad in the drab clothing of our epoch. Clay shouted but the man continued down the steps, oblivious of our nearness. I caught a glimpse of his face and recognized Stenson. Clay brought the mechanism of the time machine to a sharp halt and projected his head through the glass door. "Stenson!" he shouted.

Larry Stenson turned sharply. His clothing was torn and his face covered with blood and dirt. A cry of thankfulness sprang from his lips as he ran toward us. He sprang through the doorway of the time chamber and collapsed in our arms.

The Parting

"THANK God you found me," he said, sobbing. "I felt like a lost soul—adrift in the future."

"And we came across Professor Halden at the tomb of Chang Hsu—where you left him when you decided to return to 2250."

"Yes, I see you've picked the professor up," said Stenson as he grasped the savant's hand. "I suppose he recounted his astonishment when I dropped in on him at his laboratory?"

"He certainly did," I smiled. "I wonder if anyone ever got such a surprise in all the history of the world?"

"It was an amazing thing—as if a stranger had fallen into my laboratory from Jupiter," said Halden. "But it could not compare with what took place during the time journey. I thought I would never be found as I waited in the desert. If I had been captured by these inhuman creatures I am sure my fate would have been terrible.

But looking at this sad spectacle, I am filled with even greater horror than at anything that could happen to me alone."

"If we could only track down Chang Hsu," said Stenson.

"It might be possible," rejoined Professor Halden. "While I was in the tomb of that Oriental fiend, hiding from the guards, I came across an inscription. Fortunately I have some slight knowledge of Oriental languages. The inscription said something about Chang Hsu—I was unable to read just what—and mentioned a date which would correspond roughly to our year 2193."

"We will go back to that year!" said Stenson, determined.

The bombardment halted, at least for the time being. We drew deep sighs of relief. "We can move about the globe without changing the present time element," said Stenson. "All ready?"

"Yes."

Stenson placed his finger on the space dial handle, which regulated movement about the earth without changing the year, and we whirled swiftly through other cities in the processes of annihilation. They were in transition into nothingness.

For a few moments we found ourselves in London near the Houses of Parliament. The Thames river flowed as I had seen it centuries before. But towering structures now rose throughout the British capital. They were vanishing under the force of the death rays.

Again I found myself in a strange Paris. The Place de la Opera, for the gold domed structure still survived, was being ravaged. Throngs swept through the boulevards, lined with skyscrapers so unlike the Paris of my own time.

We stared a few hours later at a Chinese city and saw myriads of yellow faces, blank with terror, milling through winding streets. Buildings were swept from the face of the globe by the unseen hands of the annihilation ray explosions. One blast that we observed wiped out at least 5,000 human beings.

The time machine, however, was overburdened and I saw an expression of fear cross Larry Stenson's face. He turned toward Professor Halden.

"We cannot continue long with four in the time chamber," he said. "We will take you back to your own time."

Halden nodded and the dial moved again in Clay's tanned fingers, backward in the direction of our own speck of infinity. He swung the indicator to the year 2045 and we passed rapidly through decades and generations in which the human race seemed to have soared in its most glorious heights. Passing from land to land we saw immense cities inhabited by happy peoples. Wars had long since been abolished and it seemed that hatred had died from the globe.

I envied the peoples of the era that preceded the catastrophe of 2250. Never could humanity have lived more gloriously and joyously. Occasionally Stenson halted the momentum of the indicator and we lived for a few thrilling moments among these future peoples. We spent brief visits in New York and the great city of Europolis, the capital of a united Europe where barriers of race and language had been abolished.

"I wish I could spend my life among these people," I said. "What carefree happiness they enjoy."

Life seemed to be lived goldenly by these people. We paused now and then in great wooded groves to listen to splendid orchestras. Education was universal. There seemed to be neither extremes of wealth or of poverty. Even the common people lived in palatial surroundings. People traveled from land to land and felt themselves, indeed, citizens of the globe.

"This is Utopia, Larry," remarked Clay surveying one of the great parks of Europolis. "They've got heaven on earth here."

"Here is my own city as it will be long after my own time," said Professor Halden in a thrilled voice.

The indicator sped backward, cutting down the years as a scythe lays low a harvest of grain. "We are nearing my time," said Halden. "Soon I must bid you men, contemporaries of my own ancestors, good bye."

"But we shall meet again," said Clay.

Halden shook his gray head rather sadly.

"No, something tells me, my dear friends, that we will part forever. You will return to your own era—and I can but wish you every happiness."

The time machine stopped. Time had flowed backward through its mysterious agency very much to my mind as if a river streamed uphill. We were in the Europolis of 2045, just a little more than a century after our own time. Halden, returned to his own epoch, seemed pleased. I could not help but envy him. The life of the people of Europolis in 2045 was infinitely superior to that of 1945, although considerably less advanced than that of the period that was to climax in the destruction of civilization in 2045. A hundred years separated his particular era from that saturnalia of doom.

The time machine had halted beside a grove. Flowers blossomed about us and we heard the singing of a multitude of birds. Halden seized our hands and moved toward the door.

"Adieu, my good friends," he cried as he opened the door and walked through.

CHAPTER VIII

The Wizard of Pei

THE time machine throbbed into life again, with the indicator swinging into the future.

"There is only one thing left for us to do before we return to our own time," said Stenson. "The fact that Professor Halden was able to decipher the inscription in the tomb of Chang Hsu, at least to the extent of finding an approximate date for the time in which that foe of mankind existed, may prove invaluable."

"He said the year 2193, didn't he?" I asked.

"Yes. That was the date. We are going to shoot ahead to 2193 and try and locate Chang Hsu. Perhaps, after all, we may be able to frustrate him. But I am very doubtful."

The climb through time was breathless as we hovered near the indicator dial. The passing of decades dropped like leaves about us. Again we underwent the experience of hurtling through a jumble of lands and periods, catching brief glimpses of varied phases of life. "Too bad we could not take Halden along," said Clay.

"The machine would have been too overburdened," remarked Stenson. "Three men crowd this little chamber. With a fourth we would be against the ever impending threat of disaster. It was best that we left him off in his own year."

The beating wings of time seemed alive on the journey to the Pei of 2193. Here we were to face the last of our adventures. Oceans, continents swirled beneath us in an ever recurring tide. And then—we stood in the laboratory of Chang Hsu. We were again in the land of Pei, that desert fastness from which the domed-headed monsters sprang to destroy humanity.

Looking backward—or forward—to Chang Hsu, I am convinced the man was a megalomaniac. Certainly no more misanthropic being ever blotted the globe than Chang Hsu. He was mad, or else so filled with the godlike possibilities that lay in his knowledge of the protoplasm of life that he was determined to wipe out humanity to make room for his own creatures to possess the globe.

As I stood in the laboratory of Chang Hsu, I recalled the vision of the then-to-be dead body in the yellow robe seated on the golden throne in the tomb under the crumbling lama temple. I pictured the dead Chang Hsu, whose yellow hands had spanned the centuries to hurl destruction on all the countries of the globe. But he was alive now. The future, when his creatures possessed the globe, was yet to come.

As I write these lines, uncertain phases of the story linger strongly in my mind. None of us were ever able to determine whether Chang Hsu had actually created these beings in his laboratory. There was a possibility that he had merely used some strange glandular process to make a race of giants out of human beings—endowing them with superhuman qualities of body and mentality.

The time machine, with its invisible crew, were in the laboratory within a few feet of Chang Hsu. I studied the man through the glass of Stenson's time vehicle. The living

face of Chang Hsu was as impassive as the dead countenance I had gazed upon in the year 2418. I watched him bending over a battery of electrical wires connected with what appeared to be a gigantic furnace. Another Oriental stood at his side.

"Here is where—that race started," whispered Clay.

"Let us watch him for a little while," said Stenson.

Chang Hsu's thin black mustache curled stiffly down to his yellow clad shoulders and a black cap rested on his head. It was impossible to gauge the man's age. The Occidental mind was baffled in fathoming the passing years that had swept about him.

Stenson and Clay joined me in regarding him. The laboratory might have been in a great university, so completely was it equipped, rather than in the abandoned spaces of the Desert of Pei, cut off from the outer world by mountains that touched the clouds.

Here was an ideal nesting place to breed the strange race evoked by Chang Hsu. Whether they were created actually by Chang Hsu, living matter from out of the deadness of inanimate material, or merely an evolution of the human species worked into monsters by his devilishness, Pei was a land where they could live in security for hundreds of years if need be until the time came for them to stage their *coup d' etat.*

Doubtless Chang Hsu would leave ample provision for their subsistence. His scientific knowledge would provide food, possibly out of the organisms floating in the air, until the day of world reckoning came.

A scuffling sound broke the silence of the laboratory and the Asiatic servant of Chang Hsu hurried to the door, opening it noiselessly. Three huge domed-headed men entered, naked save for dirty loin cloths. They seemed terribly repulsive, with their huge heads and leather skins. This was the first time I had ever beheld any of the creatures stripped.

"I DON'T think he has improved much on nature," said Clay. "At least not in appearance. Aren't they ugly devils?"

"But look at these foreheads," interjected Stenson. "What brains they must hold. And the great bodies. They are stronger than any human being that ever lived."

"They haven't progressed to the dressed-up stage yet," said Clay. "Remember how they were wearing silky duds and jewelry when we saw them in the floating palace?"

"Sh! They're going to do something."

The three domed-headed men prostrated themselves at Chang Hsu's feet with extravagant gestures of obeisance. Chang Hsu glanced at them with scornful eyes that narrowed savagely. Then he turned to the furnace. What connection this furnace had with the evolutionary process we were watching has unfortunately remained a mystery to us. I saw Chang Hsu pour fluid into vials and these in turn were placed in a sort of matrix. Then Chang Hsu moved to the other side of the furnace.

We attempted to follow him, but we were too slow. Something was happening vague yet terrible; something impossibly gigantic and horrible. We knew that protoplasm was being created in the laboratory.

"He's solved the problem of life," I cried.

"He's mastered the secret of protoplasm—that's what he's done!" marveled Stenson. "What lessons we could learn from him."

"Suppose we wreck the whole works?" interjected Clay. "Maybe we can interfere with the course of time. We'll die ourselves, but we'll have saved humanity."

A crusading valor surged over us at his words. If we succeeded what was to have transpired in the years to come would be frustrated. We clasped hands in silent alliance. The glass cut us off from actual physical contact with those in the laboratory. We had stepped through it before. This time, we vowed, our course must be beyond chance of needless catastrophe.

"Wait, maybe those domed birds will leave and we'll have those two Chinks alone," said Clay. "We'll seize those metal bars in the corner and crush their brains out. Is it a go?"

"And how."

As if in answer to our prayers—and through rare good luck to boot—the robot creatures departed through the laboratory door. Chang Hsu and his assistant were

alone in the big laboratory. They were utterly unaware of our presence.

"All set, fellows?" asked Clay.

"We're ready. Grab those bars."

"Let's go."

Clay, followed by Stenson and me, rushed to the invisible door and threw it open. The wizard of Pei, evidently startled by this invasion of his domain, advanced toward Clay, who had passed over the doorway. He shouted for aid and his assistant joined him.

Perhaps all things are written from the start. It was inscribed undoubtedly on the tablets of eternity that Chang Hsu should evoke—I hesitate at the word create—the domed-headed men and lay the world in ashes. It was inevitable that this breed, filled with the vigor of new creatures, should succeed a humanity grown flabby through years of luxury as the powerful men from out of the North crushed Rome.

'For the first Morning of Creation wrote,
What the Last Dawn of Reckoning shall read.'

I had followed Clay, and was now out of the time machine. It had vanished from our sight. Only good old Larry, wise beyond us, cool where we were rash had remained in it. We heard his voice. "I'm with you boys."

There we stood again adrift in time facing Chang Hsu, his visage distorted with hatred. There was unimaginable cruelty in his face, with its forehead of such noble potentialities. Never have I gazed upon such a magnificent forehead at Chang Hsu's. I knew then I was glancing into the countenance of one of the supreme intellects of all time.

Chang Hsu, with a contemptuous laugh, drew back and paused at a table. A group of small objects, barely the size of oranges, were on the table. Clay tried to rush Chang Hsu.

"You are welcome to my laboratory," said Chang Hsu. "Men from out of the past, you have long outlived your time."

"I'll kill you," shouted Clay.

"Come back, you fool," I yelled. I suddenly realized the futility of our act.

"Clay!" cried the invisible Stenson. "Either go on or come back!"

"We're going on," shouted Clay.

"At him," I cried madly. I howled with hatred as I reached Clay's side and we darted toward Chang Hsu. If I could strangle this odious being, I felt I should have died happy. I never completed the rush.

CHANG Hsu pocked up one of the small round objects from the table and hurled it toward us. A hazy cloud spread about the laboratory, wiping out Chang Hsu from my vision. I struggled in a world of inky blackness that followed on the path of the mist.

A blinding flash—a roar like that of a dozen Niagaras—crushed me. I fell into insensibility.

Clay and Stenson bent over me, shaking my head and slapping by cheeks to arouse me. I stared up at them wonderingly and perceived that their faces were blackened and scarred. "Where are we?" I demanded.

"Still in the time chamber. We're back in 1945—thank God."

Stenson trembled as he spoke and I glanced up at him.

"What happened?"

"The last thing I remember, Lane, was Chang Hsu hurling that little round object. You fellows stumbled backward toward me and I could just pull you into the machine and shoot back to our starting point."

"We were lucky."

"Yes. I'm sure Chang Hsu meant to destroy us. Only because you came within my reach could I rescue you. Otherwise you would have been killed. A strange fate, for men of our period to die in far-off 2193."

"And the time machine?"

"It's wrecked. It was smashed when it shot back to the present."

I struggled to my feet, faint with weakness. It suddenly dawned upon me that none of us had eaten in a long time. I was weak from hunger. For a time I watched Stenson glancing dispiritedly about the time chamber, the glass of which was broken in a thousand places. The dial box was wrecked. I shuddered to think what would have been our fate if we had been lost in the

future without means of returning to our own time.

"Lucky thing we let Professor Halden off before we went to Chang's laboratory," said Clay. "Just think, if he had returned with us he would have been trapped a hundred years before his time on earth."

"Let's get out," I said. "This light is fading."

We opened the door and stepped into Stenson's outer laboratory. The library lay beyond and I darted toward the book-lined room, overjoyed at its familiar appearance.

"Sit down fellows," said Stenson. "I'm going to cook a little food for us. Coffee and eggs. How does that sound?"

"Great."

He telephoned to the operator in the lobby of the building and asked the date. It was the eighteenth of June. We had started on our journey on the sixteenth. Two days had passed into the future, while we had travelled hundreds of years. Stenson cooked the meal on an electric stove. We chatted with him as we cut a rather stale loaf of bread and set the table.

"Are you going to make another machine, Larry?" I asked.

"No. I'm through."

"But perhaps we might return and kill Chang Hsu. And then I'd like to chat with Halden again."

"No, fellows. I'm afraid we can never interfere with the future. I am going to leave records for future generations to hunt out the land of Pei. Perhaps they can crush Chang Hsu. Doubtless Halden will do the same. But neither his time nor ours extends into the period of Chang Hsu. Hundreds of years will elapse—and we will be laughed at as fools."

THE END

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OTFRID VON HANSTEIN'S

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The House in the Clouds

By Ulf Hermanson

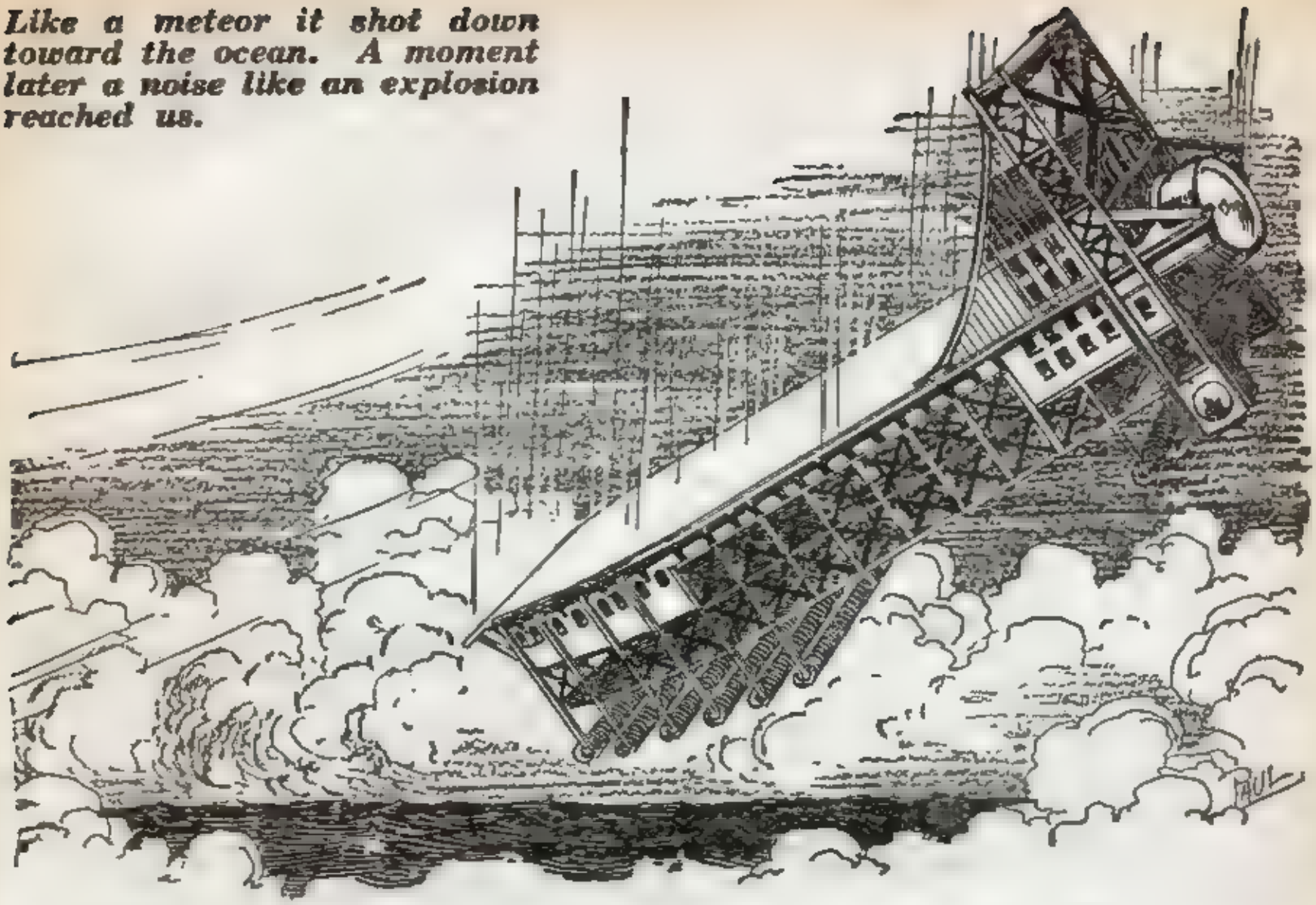
Illustrated By Paul

The Great Secret Was Within Their Reach But Fate Took A Hand

THEY all thought that he was crazy when he told his story. Nobody would believe it. They didn't know him well enough to be certain that he wouldn't try to put that sort of nonsense over on them, and as to myself, I had never seen the man until that night at the Aero Club. Before that I had only heard vague retellings of the original story, and I must admit that, impossible as it sounded, I was rather prejudiced against its author.

I had been having a busy day and had, after dinner, sojourned to the Aero Club which had its clubhouse right at the airport, in fact it had grown to be quite a part of the port.

It being Monday, I knew that there would not be too many guests at the club and



Like a meteor it shot down toward the ocean. A moment later a noise like an explosion reached us.

looked forward to a quiet evening spent in discussion with some friend.

Arriving at the club and finding no one there, I took a newspaper and seated myself next to the fireplace. On my right was a large window which gave me an excellent view of the entire airfield.

It was getting darker every minute and I suspected that I would be left to my own company for the rest of the evening when I heard the distant roar of a plane approaching. Five minutes later the door closed behind me and in the next instant a man took an armchair next to me with a cordial "Good Evening."

In greeting him I turned and had an opportunity to take a look at the stranger. He was tall and dark-haired with grey eyes. His mouth was thin-lipped and he had a square, resolute jaw. However, in spite of these hard features, there was a kindly expression on his face. Whatever it was about him, I don't know, but I became at once interested.

He was rubbing his hands near the fire, so I chanced to remark: "Must be awfully cold up there tonight."

"Oh well," he answered, "it's not so bad, but I will admit that when you get far over the Atlantic, it is apt to be cold."

I asked him if he often went out far.

"I was about a hundred and fifty miles out this afternoon," he said. "I am still looking for it you must know."

I understood at once. "Oh!" I exclaimed, "so you are Mr. Banston. I haven't had the pleasure of meeting you yet." I told him my name and we shook hands.

"I suppose you, too, think I am crazy," he said, after a short pause.

I looked at him. "No," I said slowly, "I don't think so. I have seen a good many sane people that looked far more crazy than you do."

We both laughed heartily.

"If you don't mind," I told him, "I would like to hear your story from first hand, as I have only heard more or less revised versions of it."

He said that if I didn't mind he would order something to eat as he was awfully hungry, having been about four hours in

the air without food of any kind. Then he would be only too glad to tell me his experience.

We called the steward, and soon he was digging into a platter of ham and eggs.

As we were enjoying our cigarettes and coffee he began:

* * * * *

It happened about a month ago. I had just come out of the Navy, having served as a pilot. I had heard of your excellent Aero Club, so moved down here and joined. My father left me a good deal of money so I am able to devote all of my time to flying.

I brought a monoplane of the low-wing type, and started taking a regular trip every day. After a week I had three students; having been a Navy pilot, you can account for that. A funny thing about me is that I never get tired of flying. I will often go up alone and go for a long trip to another city and have lunch and then go back.

One Sunday morning, about a month ago, I went up, and, as the weather looked very promising, I thought it might be fun to go out over the sea.

MOST people assume offhand that any invention which will help man do part of his daily work, increase comfort and provide more of the good things of life, should be placed at his disposal.

Some people differ in this. They say that mankind should not get any invention until it is ready for it and has the intelligence and desire to use it wisely. This is a point on which much dispute is possible. Certainly many of our great inventions have been put to evil uses, and perhaps we might have been better off without them. Yet who can tell in any particular case what the effect of a startling invention, such as a machine to nullify gravity, might be? Our author has his own point of view and he gives it to us in this excellent story.

A Strange Sight

I GAVE her the gun and roared out over the coast line. I fell in deep thought, as you know one often does when he is flying straight. My course was about north, northeast and I was flying at an altitude of about 5,000 feet. I imagine that I had flown about a half-hour when I suddenly found myself in a fog. I tried to climb out of it without success. I looked at my gauge and saw that I had only gas enough left for another half-hour. I didn't dare dive too far as the fog might reach the water and I would plunge in. You know altimeters aren't absolutely exact. I decided to climb to about 10,000 feet and give her the gun homewards. I pulled up the stick, and, taking a left bank, I gave her the gun and started spiralling upwards.

I had reached about 9,500 feet when I suddenly saw a sight right over my left wing tip that made me gasp.

I was so shocked and taken out of mental balance that I fairly jumped in my seat, for right in the air hung a metal thing of the size and shape of a gasoline tank. First it struck me that I must be home in my bed dreaming, but I stared at the tank and discovered that it hung on a thin steel wire and that it was being drawn away from the earth. I had now regained my senses. I circled away from the thing and looked upward along the wire. Again I was so stunned that I lost control of the ship and suddenly dived down towards the sea again. But I was getting mad now. I pinched myself in the arm to see if I was still alive, or just a ghost roaming about in the underworld; for what I had just caught a glimpse of before I lost control of my ship had looked like a section of a steel bridge suspended in midair.

Again I gave her the gun and shot upwards toward the object I had seen over my left wing. Soon I was at the same height and circled around it while I tried to calm myself.

It was a section of a modern steel construction bridge. There was a house on it.

The sort of house you see on a crane, but much larger. On top of the bridge was a long runway. From above the whole thing looked much like one of the Armstrong Seadromes, except for the big housing under the runway.

I was circling right above it at an altitude of 20,000 feet as my motor suddenly started puffing, and, before I knew what had happened, I went into a flat dive with a stalled motor. I was about 1,000 feet above the "Drome," or whatever it was, and mechanically I steered right at it, it being my only salvation from the sea. I made a three-point landing on the runway and stopped quickly.

I sat there like a man fallen down on the Moon and didn't know whether to laugh or cry, or to get out of the crate. But two men suddenly popped up from somewhere. They were dressed in airmen's overalls and addressed me in perfect English.

"We better take her below," one of them told me, and I crawled out of the ship and stood on the run-way trying to recall where I had gotten drunk.

The man who had spoken started to haul the plane away towards a leveled elevator as the other one came up to me.

ULF HERMANSON

"I guess the Professor would like to see you, if you please," he said in a very polite tone.

"Listen here," I hollered, grabbing him by the arm, "am I drunk or dreaming, or what the Hell *is* this?" My brain seemed to spin around inside my head. Here I was standing in midair, clouds above and clouds below, and a man talking to me in a perfectly human way as if we were standing home in my own living room.

"Oh!" he said with a little over-bearing smile, "'tis only a matter of conquering gravity. Everyone knew that that would be done sooner or later." Then with a gesture that I should follow him he opened a hatch, and as I followed him down a stairway, I saw my plane sink slowly under the level of the runway.

I entered into what looked like the interior of a ship, through long corridors and down a stairway. I reached a door; the man who had been leading me stopped and knocked. The door opened and I stepped inside. I found myself in a large room, or laboratory, filled with instruments, books, and electrical panelboards and switches. A square-built, gray-haired man came towards me, apparently the professor referred to.

"How did you find my 'Castle in the Air'?" he asked me. He did not bother to introduce himself or ask my name. "I though that I had positioned myself at a place that no one would easily find." He seemed to feel quite peeved that someone had discovered his secret. I told him that the tank on the wire had originally directed my attention toward the "Drome."

I was anxious to ask him a lot of questions and he knew it.

"When I noticed that you had discovered us I stopped your motor and forced you to land on the runway," he said casually.

"You stopped my motor?" I exclaimed. "How the deuce did *you* stop *my* motor?"

"We Have Not the Time to Live"

MY host offered me a chair and a smoke.

"Really," he said, "you mustn't find it peculiar that a man who has conquered gravity, also has the brain to make a device that will stop such a simple thing as a gasoline motor. If you had a Diesel motor on your ship I would have been unable to stop you as there is no electrical ignition in that type of engine."

He got up from his chair and opened a

window. "Look out here," he said. "We are just now about 20,000 feet over the surface of the sea. Tomorrow I will be possibly 25,000 feet above sea level. I can move about, up or down, in fact nothing prevents me from going into space exploring the other worlds."

"How marvelous!" was all I could say.

"Come, let me show you my observatory," he said, and I followed him through a door into another room. In the center stood a large telescope.

"Here I can study the stars without being disturbed, in perfect peace, away from all the noise of the world."

I looked at him. Judging from the expression in his eyes he did not have much use for the world. He seemed perfectly satisfied here in his own world.

As we passed from the observatory, he pointed to a little door. "There," he said, "is the force that keeps us up. Did you ever hear about the experiment with the silver balls suspended in air by charging them with electricity?"

I replied that I had.

"Well, this is the same principle," he said, "but none will ever find out how it is done."

We went back to the first room, where we had met, and again seated, I asked him why he did not publish and commercialize his discovery.

"I expected you to say that," said the gray-haired man, "but do you realize what it means to conquer gravity? Do you realize that it is the greatest discovery ever made, that it is the final discovery? There is nothing more to be discovered after the discovery of the secret of gravity.

"Chaos! Catastrophe! would be the result of introducing my secret to the world. Think of what it would mean to transportation. Airplanes would disappear—railroads would be of no use any longer. All traffic would take place in the air. The atmosphere would be filled with cigar-shaped vehicles propelled by airscrews driven by low-horsepower motors. Seagoing ships would be things of the past.

"Young man! Listen to this. My discovery would enable us to lift the heaviest battleship into the air and carry it wherever desired. Think of a future war!"

I looked at my host. Peculiar that he would talk like this to an uninvited stranger! I was still sort of dazed and had to look out of the window to assure myself that I was sitting in mid-air, and not on earth listening to a madman.

"I don't see your point," I responded. "What harm would all these things you mention do the world? It would promote transportation, help trade and speed up everything."

The professor looked at me with a pitying expression in his eyes. "That's just it," he said. "It would speed up everything. We have no need of speed; on the contrary we must slow down. We forget to live, now we have not the time to live."

He had started walking up and down the floor. Suddenly he stopped. "See that picture there?" I looked as he pointed to an etching on the wall. It pictured an old castle in the Renaissance style with a great park in the foreground in which were seen people slowly walking in couples dressed in the garments of centuries ago. On the lawns children were playing. The whole picture with its green majestic trees and hanging clouds above the graceful towers of the castle, was a perfect image of tranquility. It was the only picture of its kind hanging there among blueprints and electric meters.

"That is life," said the professor, "life as it should be, slow and thoughtful. The people you see there had an inward life, besides an outward one. Modern man's inward life goes no further than his brain. Brain work, my friend, nothing but brain work. Modern civilization is like a fast train. You look through the windows at life passing before you. At first you see everything clearly, but as the train gains speed, the scenes of life rush by you. You see no details, you get dizzy from the speed and turn your head from the window, and before you realize it, it is time to get off, because the speedy train brings you to the end of the line sooner than you expect."

"Of all self-contradictions," I exclaimed,

"you stand supreme. You are condemning your own work."

My host took a chair and lighted a cigar. It was a long while before he spoke. He seemed to stare at something out in the atmosphere. His eyes had a dreamy expression and I wondered if I should ever again meet another man like him. Finally he turned to me:

"I Will Take Them By Surprise!"

"I HAVE worked on this all my life," he said. "As a young man I became professor in Physics at one of the greatest of American universities. For years I experimented with the one goal in view: To find an electrical way of eliminating or equalizing gravity. I was sure that it was a matter of electricity. I forgot the world and buried myself in studies. I experimented day and night. Finally, when I had given up almost every hope, I stumbled over it. By accident the nature of gravity was revealed. My two assistants and I financed and built this drome or laboratory. However, at the point where we considered commercializing the secret, we were all startled by calculating the effects of our discovery. We three all realized that we could not take the responsibility of revealing the secret, so we moved out here over the ocean, keeping in contact with the world by means of radio and television. We have a small biplane in which we travel back and forth to the earth."

"And you don't ever intend to reveal to the world what you have discovered?" I queried.

"Sometimes," he answered, "I am tempted to let my secret go to the bottom of the sea, but after all it is a child of mine. I am too weak to destroy it."

"Remember the old story of the Arabian Knights where a king attempted to build a palace in the air? People laugh at such things; still it is perfectly possible.

"Think of what tremendous territory the underworld would gain by my invention! The rendevous of the gangs would hang like wasps' nests in the sky, ready to move or to spread destruction.

"Man would travel to other planets. Nations would become nomads. Everything would be Chaos. Not until man has reached a higher level of culture shall my discovery be revealed, and at that time I shall be long dead."

He turned to me. "I don't know why I have told you all this, Stranger," he said. "I do not even know your name, and you do not know mine and we will never see each other again. Mr. Bahr has refilled your gas tank. I wish you a safe trip home."

Silently we shook hands. I was too much impressed or stunned to speak.

He then led the way up to the runway where my plane had reappeared. "Don't try to find me again," said my gray-haired host. "Your instruments won't work for fifteen minutes after you take off. After that you won't see me and we will be moving away to a thinner atmosphere where you can't follow me. Goodbye!"

I crawled into the cockpit without a word. Here I had had a glimpse of the greatest miracle of science, been enthused and had marvelled, and now it was going to be snatched away from under my very nose.

"Contact?" One of the assistants had stepped up to my propeller.

I woke up. "Contact!"

After flying blind for fifteen minutes my instruments suddenly came into function again and I soon found my homeward course—under me the endless ocean—over me the more endless sky. My gaze scanned the horizon. Nothing, absolutely nothing, in sight.

* * * * *

"This is the story, believe it or not," ended the ex-Navy pilot, throwing his cigar butt into the fire. I have been looking for that thing ever since and I am still looking for it"

We were both quiet for a long while. Then I said with a smile, "And when you find it?"

He looked at me with a searching glance. "When I find it I am going to bring his secret to the world. I will take them by surprise. I am going to handcuff the two

of them and force the third man to move the drome of this very landing field."

Ready to Start

THE next Saturday I met Banston on the flying field. I had been busy all the week and had not been at the club.

Banston was having his motor tuned up and was watching the mechanic closely. I called to him and he climbed down from the machine.

"Hullo, there," he said, shaking my hand. "I thought that the only non-skeptic had forgotten me."

"On the contrary," I declared, "I have been thinking quite a lot of you and your adventure."

I pulled him over in a corner of the hangar where nobody could hear us. We sat down on a box.

"Do you think that you have any idea as to what kind of electrical machinery the drome has?" I asked him. "Just a rough idea, do you think he has any generators on board?"

Banston looked at me in surprise. "Of course," he exclaimed. "That is one thing he is bound to have."

"Good," I said. "It is solved."

Banston looked anxiously at me.

"I am a radio engineer," I said, "and as far as I know there is a certain type of detector available that, with the proper amplifications, will detect a generator inside a circle of twenty-five miles."

Banston's eyes were shining. He understood me at once.

"If your friend the professor," I continued, "should have a Rhumkorff coil active, we should be able to hear him at least forty-five miles off. So, you see, it is of no use for you to search blindly, wasting your gasoline and time. What you have to do is to merge with me and we will catch him with the 'Radio Ear'."

"Do you mean it?" Banston had sprung up like a young hound that smells game.

We shook hands.

"I was going to take off now," said Banston, "but I suggest that we postpone it and concentrate on the plans first."

After he had given his mechanic instructions to store the plane away, we hopped into his car and sped for my laboratory. We spent the entire evening studying blue prints and planning how to install the radio in Banston's ship.

After a few days one of my assistants had completed the "Radio Ear," as we called it. It was a simple matter for him and the result was quite satisfactory. He had stepped the signals up with twenty tubes and thought that it would be sufficient. I had him install it in Banston's monoplane, suspended on rubber rope in front of the front cockpit. The batteries were fastened under the seat.

Banston and I spoke to no one about the affair although I had a hunch that the rest of the boys guessed what we were up to. We installed the "Radio Ear" at night to avoid curious onlookers.

A perfectly gray day arrived. My telephone rang. It was Banston. "Are you ready?" he asked. (We had decided to go on our adventure in gray weather.)

"OK," I answered. "I'll be there. By the way, my assistant showed me some tear gas bombs yesterday and it struck me that they ought to be the things to handle them with."

"Fine!" he exclaimed. "I never thought of that. That will free us from the necessity of any rough stuff." He hung up.

I stood thinking for a while before I put my hat and coat on. I am by nature a very peaceful man and it sort of tasted criminal-like to me, to attack people against whom I had no ill feelings at all. I admit that I was quite excited. Then I thought of the wonderful thing we were about to accomplish, winning for the world the power over gravity. It made me dizzy to think about it. Not until this moment had I so strongly realized that it was a reality, that far out above the ocean lay our secret.

"And even then," I said to myself as I started my car, "we may not find it." This uncertainty made me feel at ease again. It gave our enterprise a taste of mystery

that permitted me to take it less seriously.

Banston had the motor already going as I reached the field. I donned the flying suit and climbed into the cockpit. I adjusted the sensitive earphones and tested the "Ear." Everything was fine. I could hear the generator in one of the motor cars at the corner of the field.

"Here," said Banston as he stepped up on the wing, "is something I just got. They are trying these out in the Navy." He produced a thing that looked somewhat like a baseball catcher's helmet to which was attached a pair of powerful binoculars, and put it on my head.

"This will enable you to steady your glance even in an airplane," he explained. "This little box on the rear of your head contains a tiny gyroscope and at the same time counterweights the binoculars in front so that your neck doesn't get tired."

He put one on himself and we looked at each other and burst into laughter. We looked like a couple of bugs with our feelers sticking out in front. Then we shook hands and he climbed into the cockpit behind me.

Found!

WITH a roar of the engine we took off and made for the sea. Banston was of the opinion that the drome must be somewhere in the direction of the north-northeast because of the dense fogs always encountered about a hundred and fifty miles at sea in that course. As a matter of fact few planes came that way, still Banston was hoping and suspecting that the drome would be above the fog.

We had started at 7 o'clock in the morning and at noon we had not yet found anything. We had been ashore and had lunch and refueled. We were now shooting straight east to search an area we had not yet scanned with our binoculars. Every five minutes I tuned the electric "Ear" to save the batteries. Once I was fooled by the generator of a yacht below us and we decided to take a higher altitude.

A wind had begun to blow from the north. Ahead of us a great bank of fog suddenly towered against the sky. Banston gave her the gun and we climbed rapidly in order to hop over the fog. A moment later we struck the edge of the bank. I turned the electric "Ear" on and listened alertly. Banston was still climbing. All of a sudden we popped up through the fog and found ourselves in clear sunshine. At the same instant a soft low humming came to my ears. Breathless I turned my little antenna frame and the hum became stronger. I turned in my seat and waved at Banston. His eyes almost popped out of his head behind the binoculars. I pointed in the direction my antenna indicated and he turned the ship that way. After a while the humming became stronger and I motioned to Banston to climb. It was our intention to climb above the drome, and when it was sighted, to cut our motor and glide down on it, attempting to come unheard and take them by surprise. Of course, it was one chance in a thousand, but it was our only hope.

The wind increased and our speed was reduced somewhat. Suddenly I noticed that the humming gradually became weaker until I could hardly hear it. Although we had stared ourselves pop-eyed through our glasses, scanning the air about us, we had seen nothing and still we must have passed the drome. All indications showed that we were going away from it.

I hollered to Banston to turn clear about. He made a sharp bank and I held my gaze right over the nose of the ship. The moment we were clear about, a little cloud hanging higher than the fog below us attracted my attention. A second later, as a gust of wind moved it a little, a tiny speck appeared next to it.

I gasped, and without turning my head, I waved my hand to Banston. He had seen it too, for he instantly started to climb.

So that was why we had not been able to see it before. The professor apparently manufactured his own clouds and used them as a hideout.

Through my binoculars I watched the drome come closer and closer below us.

I can hardly express the feeling with which I stared at this piece of steel construction hanging there in mid-air. It was

a sort of horror mixed with curiosity. My heart beat faster with the thought that in the next few moments I was to land on this miracle and take it into possession.

I jumped in my seat as Banston cut the gun.

My eyes were glued to the drome as we, in a neat spiral, descended. No one was on the runway although a yellow biplane was parked at one end.

Half a minute later we swept in past the biplane and stopped at the other end of the runway.

I turned around, nobody in sight. We expected every minute to hear somebody come running up the stairway, which I could see through the open hatch; but nobody came. We waited one minute to be sure that they had not heard us and then we got out and pulled our ship to the other end of the drome as silently as we could; so that it had its nose to the wind. Banston moved the propeller into a starting position so that we would be able to make a quick get-away in case of retreat.

"You cover them with your gun if they should come up through the hatch, while I go down to see if I can surprise them." Banston drew his gun and a couple of tear-gas bombs and descended.

I was left to myself with the ship. The moment Banston disappeared I felt lost. I understood now how he felt when he first visited the drome. I ventured over to the edge of the runway and peered down. Under me I saw banks of clouds and I could hear the murmur of the ocean far below. I looked up. Above me was the blue sky. The more I let my glance wander from the clouds below to the blue sky above, the more I lost my sense of orientation. Soon I did not know what was up and what was down. Dizzy, I turned away and walked over towards our ship.

Lost!

AS I leaned against the fuselage wondering what had become of Banston, with my eyes glued to the open hatch I suddenly caught the glimpse of a shadow moving at my left side. I froze in my tracks, but managed to stand still as if I had noticed nothing. Slowly the shadow moved up toward me. When I thought it was time I swiftly spun around, and diving low, I planted a straight right in the stomach of the owner of the shadow. He fell instantly, gasped a little, crumpled together with both hands on his stomach and lay still. He was a skinny man in a flying suit, apparently one of the professor's two assistants. I lifted his eyelids and assured myself that he was unconscious. I took his belt off and tied his hands behind his back. A big wrench had fallen from his hand as he fell. I threw it overboard.

As Banston still failed to give any sign, I decided to venture below myself. As I reached the hatch some instinct made me suddenly fall down on my face. I heard a scrambling of feet and saw, the next moment, the head of a man appear above the level of the runway. Luckily, the stairway led away from me and thus his back was turned to me. He had a gun in his hand, and however much I hated to do it, refusing to take any chances I hit him on top of the head with my gun butt. After I had tied him up like his comrade and hauled him to the other side of the biplane, I hurried downstairs.

After having fumbled through corridors and descended two stairways, I suddenly heard noises. Sneaking up towards the door from which the sound seemed to come I heard Banston's voice eagerly arguing, mixed with the voice of another man, obviously the professor.

I opened the door presenting my gun. The professor started towards me, thinking that I was one of his assistants. When he saw it was a stranger, he turned pale and an expression of hopeless despair came over his face.

Banston was securely tied to an armchair. In a moment I had cut him loose with a penknife I found on a desk next to him. He got up and stretched his arms. He then walked over to the professor who had sunk down in a chair.

Banston had just opened his mouth as the professor suddenly looked at me with an expression of horror in his face.

"Did you get them both?" he cried. "Did you get both of my assistants?"

Before I could answer, an alarm bell on one of the instrument boards made us all jump.

"My God! The engine," yelled the professor. "The engine! You got Johnson! The engine is stopping! We are sinking! Save yourself!"

Before we knew what had happened he had disappeared out of the door.

Panic-stricken we dashed out and raced up the steps to the runway.

"Start their motor while I cut them loose," I hollered to Banston as I sprang toward the two assistants who were tearing at their bonds.

The drome had already begun to sink, swaying here and there while the air roared up past the edges of the runway.

The two men jumped into the biplane as Banston pulled their motor over, and as it started, jumped over to our own ship, diving into the pilot's seat.

I was waiting at the propeller.

The last thing I saw before our engine went over with a roar was the professor with a black box under his arm being hauled into the front cockpit by his assistants as their biplane roared past us.

The next moment I jumped headlong into my cockpit as we sped towards the end of the runway and took off.

We banked and turned, looking for the drome. With a whistling noise like a meteor it shot down towards the ocean and disappeared in the fog below us. A moment later a noise like an explosion reached our ears. Science's greatest miracle had forever gone to the bottom of the sea. Banston dived after the sound, but when we reached the surface, nothing was to be seen. The waves were rolling as if there had never been such a thing as the drome.

Staring at the swelling waves, we circled above the spot where the drome supposedly had disappeared.

It had all happened so quickly. Our mistake was that we had believed that we were surprising the inhabitants of the drome; in reality they had seen us come and had prepared an ambush for us. Only my seeing the shadow behind me had averted the capture of us both. And still the drome was lost—lost forever. Fools we had been, damned fools, like schoolboys picking apples before they are ripe.

I looked at the waves. I saw before me a changed world. Curious aircraft filled the air. Even solitary persons were flying about at will. Tremendous ships arrived from Mars and Venus. Everything was speed and machinery. My inner eye viewed the future man, dressed in a tight-fitting leather suit. He manipulated buttons and levers, ate little pills of concentrated chemical food, used no books, just slide rules and calculating tables. I saw his soulless eyes look at me. He grinned, an animal-like grin. Suddenly I awoke from my dizzy visions.

A shout from Banston made me turn.

He had discovered something that was floating on top of the waves.

We went as low as we dared and circled about the spot where he had first seen it.

There it was again!

On top of a big swell we suddenly saw a large drum, a gasoline drum, apparently the one that had first attracted Banston when he discovered the drome. In the fall it had torn its cable and was now floating on the sea as a last reminder of a lost world. By an irony of Fate it was the first and last thing that Banston should see.

As a wave rolled over the swaying tank, and our eager eyes expected it to reappear, it failed to come into view.

Not two minutes before we had been standing on the greatest miracle of all times. We had felt its solid material under our feet, had seen and heard the people that had achieved the wonder; and now, as if struck by Fate, it was gone, gone without a trace.

I turned and looked at Banston. There was a desperate, hopeless glint in his eyes as he sat there in the pilot's seat as if carved in stone. Then he gave his ship the gun and climbed.

The ocean seemed more endless than ever as we sped homeward. Tired, I fell into a trance. As the time went, our adventure

(*Concluded on page* 605)

The Invulnerable Scourge

By **John S. Campbell**

They laughed at him when he predicted a world stricken by a terrible plague—but it came!

DR. Peter Riis made his living from bugs, generally, and harmful, poisonous bugs, particularly. All day he taught Insectology in his corner of the College, and most of his spare time was spent in reading or writing highly technical papers on *Ichneumonidae*, *Ephemeridae* and kindred topics. That Entymology paid—at least to one as devoted as Dr. Riis—was proven by the fact that he did not have to rely at all upon his meager salary as the Head of the Department of Biology, drawing considerable sums from a highly successful method of combatting the Corn-borer.

His method was simply: by cross-breeding several species of insects and subjecting each generation to certain conditions, he had evolved at the end of two years a parasite upon the Corn-borer; a minute creature tracing its ancestry vaguely to *Chalcididae*. The eggs of this creature, dusted over infected fields from an airplane, soon gave

Illustrated by Marchioni

. . . . News of a dreadful railroad accident caused by the rails made slippery by millions of insect bodies . . . .

the unfortunate borer a disease which was as contagious as deadly and resulted in the complete extinction of the pest.

Dr. Riis' interests, however, were not confined to academic or practical applications of his knowledge. He experimented constantly for his own amusement and results were often grotesque; such as his cricket, whose kitten cries kept the Woman's Hall awake half the night: or the huge beetle with luminous eyes. But these, however, are different stories.

The events which really led up to that with which this narrative is concerned, took place near the end of the Spring quarter. Dr. Riis and Prof. Herman Ludwig Pfeffler, of the Department of Physiology, were preparing their final exam papers together. An important question in Prof. Pfeffler's Questionnaire had given them pause, and that great savant was explaining his stand.

"Das question, Doktor Riis, iss nod staded dot vay. Id said 'Oxblain ten reasons vy man iss bedder suited for der Survival of de Fittest dan any odder genus'. Now vot iss wrong mit dot?"

"Everything," answered the other, with gusto. "If man was better equipped by nature than any other genus he would have won that struggle."

"Vell," said Prof. Pfeffler, with a sweeping gesture, "Id iss gut of you to tell me dot. Und how long, may I ask, haf ve been under der iron appendages of our conquerors?"

"Ever since we emerged as a race," replied the Chair of Biology, in a tone of conviction.

Prof. Pfeffler was exasperated. He gesticulated, to add emphasis. "Always you make dos imbossible statements! Mein Gott! Vy can't you be serious vunce?"

"I am now."

"Den go und brove id! Go down to der jungles uf South America or some place und get me a specimen uf our superiors in this world. Take all summer, if you vant, but show me vun!"

"Why wait so long?" replied the other. "Here"—he made a sudden motion with his hand—"is one of our conquerors." He held a fly under Professor Pfeffler's nose. That person regarded it with disgust.

"Mein Gott!" he arose to his feet gathering an armload of papers. "Diss iss too much. *Guten Tag, mein Herr* Riis!"

He started out wrathfully, when Dr. Riis stopped him.

"Now don't go off like that, my dear Herman. Remember I still have two questions I want your opinion on."

Prof. Pfeffler turned about in his tracks.

"Mein opinion," he snorted. "Of vat use iss mein opinion to a great, super-cerebral, scientific mutation like you?"

"Now Herman, be calm, you haven't given me a chance to prove what I said."

"Profe id?" Prof. Pfeffler glared at his colleague. "Profe dot de fly iss de conqueror of mankind? If so vy did he nod flatten you oud for disturbing his peace?"

"O, the fly isn't—that. I meant it only paradoxically. He represents that most numerous class of animals, the insecta."

"O! He does, does he? Und den—".

"Precisely, my dear Prof. Pfeffler. The insects are the real masters of the world. Consider that most humble creature, the cockroach. His remote ancestors, almost exactly like those of today, wandered before the first Dinosaur shook the soil of a Jurassic swamp. He scrambled between the toes of the Mastodon, he invaded the caves of the first Men, and today, my dear Professor, if I am not mistaken, you asked my assistant for some of my insect powders to combat cockroaches in Mrs. Pfeffler's most excellent kitchen."

"Und vot" said the other, "has dot to do mit vot you shust said?"

"That is just an example. Again may I ask you to consider the Ant. That—?"

"Vell, if dey are so strong vy don't dey rise oop und exderminate us? I should tink dose great strong creadures would lose batience mit beoble like you who are so undignified as to grab a fly by the legs mitout asking his bermission."

OUR gifted young author of "The Infinite Brain" offers us now this exciting story of a new world menace. The idea he gives us is a startling one! As he says in his story, "the only thing that keeps the insect kingdom in check is the balance of nature. In the preservation of this balance, lies the existence of life on the Planet." But suppose by the hand of man, and a strange accident, this balance were destroyed and an "invulnerable scourge" appeared on the land. WHAT WOULD HAPPEN? Our author tells us now in his own vivid and convincing manner.

"THEY don't exterminate us," answered Dr. Riis, "because they don't need to. If mankind were to encroach too much upon their domain he would be utterly defeated. Science prides itself upon winning battles with the insect kingdom. They can hardly be called battles since the enemy never attacks man, but merely begins to colonize new territory. When the insects really come in force, mankind just has to duck and pray."

"Und to vat do you refer?"

"Well, locusts for one thing. What did the ancient Egyptians do when they came along? They locked up their windows and laid sacrifices to Isis and Ra. And what does the modern science do when a plague comes? The same thing, my dear Prof. Pfeffler. And if anything is left of their crops they thank Heaven."

"Vell?"

"The only thing that holds the insect kingdom in check is Nature. Her perfect balance is always maintained, in spite of a little Locust plague once in a while. In the preservation of this balance lies the existence of all life on the Planet. It is like one of

the balanced aquariums your students have been making. Every living thing puts back into the earth that which it takes out, and there something else takes the food material and converts it into another form, which can be used by a different creature. This cycle is necessary for the continuance of life. Each species is necessary for the existence of every other. Without the plants, the animals would starve. Without the insects, most birds would die and many flower-bearing plants would be exterminated for lack of pollenization. Without birds to distribute their seeds, many plants would be confined to a small area of the earth's surface, where they would eventually die.

"In short, the lack of any one of the major *orders* would seriously upset the natural cycle and possibly result in a depletion of life on the earth. Similarly, a sudden increase in the numbers of any *order* would have just as disastrous an effect. Too many animals would soon eat up all the plants, and then each other, until finally the survivors would starve. Too many plants would literally crowd the animals into the sea, for in dense jungles, such as are found near the Equator, the majority of animals cannot live. While in the bamboo brakes only snakes and birds can exist.

JOHN S. CAMPBELL

"Fortunately, however, the balance is kept. Each species has its enemies which keeps its ranks thinned. In general man cannot disturb this balance; though there have been such cases. Slaughter of coyotes in Eastern Colorado resulted in a plague of rabbits, which multiplied amazingly once their natural enemies were removed. Rabbits, fortunately, are not a very prolific species as some go. Do you know, my dear Pfeffler, how many descendents one oyster would have at the end of four generations if every embryo lived."

"Vell, I nefer boddered meinself mit such—"

"That single oyster would be the ancestor of 66,000,000,000,000,000,000,000,000,000,000 more — and their shells would weigh eight times as much as the earth! Of course they never could do it, for lack of lime—but that is only an example of what some kinds of animals could do if all their natural enemies were removed."

"Ja" responded Prof. Pfeffler, undaunted. "If dey could be remofed—but dey can't, *mein guter Herr Doktor*. So fortunately for der world, you can go on und theorize all you vant to. In der meantime I haf to finish dese examination babers."

"If they could be removed," repeated Dr. Riis, more to himself than to his companion. He thought for a moment and then said—"And, my dear Pfeffler, what if I told you they could?"

For the second time Prof. Pfeffler arose. "If dey could," said he, with determination, "vich dey can't, I vould go right home und trow away der insect powder und start a boarding house for cockroaches. Gut tay."

After he had gone Dr. Riis stared out of the window for some time before resuming work on his papers. When he did so it was with the glint of a smile as he murmured to himself—"Well, maybe I won't take that vacation after all. It would be good to prove old Pfeffler wrong."

It was Spring again. Sitting by his big study window where he could see the landscape, Dr. Riis was writing up his examination papers. His study was considerably changed. Up near the window was a large screened box and there were numbers of glass and netting enclosed cages on the table. From them rose intermittently a buzzing. Now and then Dr. Riis paused to glance toward the big cage and as he did so, he would smile slightly, as if thinking of something highly amusing.

Suddenly there came a knock at the door. In answer to Dr. Riis' "Come in", there

entered a portly gentleman with glasses and portfolio, whom the Chair of Biology recognized as Prof. H. Ludwig Pfeffler.

"Delighted to see you, my dear Professor," cried Dr. Riis, cordially. "Sit down. And is it the examination papers again?"

"Id iss," responded Prof. Pfeffler, slapping his brief case upon the table. "Such a lot of *Dummkopfs* vot iss trying to learn Physiology. I esk vun girl 'Give your reasons for believing in der theory of evolution?' Und she said 'Because you said it vas zo.'——Ah! vot iss in dose boxes?" Pointing towards the window.

"Bugs," replied Dr. Riis dryly, repressing a smile. "In the large box there are some larvae which I expect to metamorphose in a week or so. Sort of a new type; nothing radical in appearance, you know."

"Vell," said Prof. Pfeffler, "call me oop ven dey come oudt. I vuld like to zee dem."

"I will," replied Dr. Riis, "Well now, about these examinations. I am going to base my questions this year principally upon the organic chemistry involved in animal life. Question one reads '____ _____ _____' ".

CHAPTER II

King of the Earth

ANOTHER Spring day with birds singing and butterflies already flitting about the garden. Dr. Riis stood beside his cage, watching its contents intently. There came a knock, and a moment later Prof. Pfeffler entered.

"*Guten Morgen, Herr Doktor.* Zee vat I caught on der Campus joost now."

Carefully opening his cupped hand he displayed to his friend a gorgeous butterfly.

"A *Phiclides Ajax*—so rare here."

"Wonderful!" said Dr. Riis. "How fortunate for you to catch him."

"Ja," admitted Prof. Pfeffler. "Almost did I break mein neck, chasing him. Und mit only mein hat to catch him. I schvear I vill neffer go oudt again mitout a net."

At that moment the attention of both Professors was riveted upon one of the cages. The larvae were beginning to open. For some moments they watched in breathless interest, making now and then a highly technical comment as the various anatomical parts appeared. At last an entire insect was before them, slowly extending and contracting its still damp wings.

"A *Coleoptera**—uf der species—"

"Of the species—*Rex Orbis Terrarum*," said Dr. Riis, after a pause.

"King uf der earth—vat do you mean?" demanded Prof. Pfeffler.

"Well, let us sit down first." A pause, then "Do you remember last spring I made the remark that—"

"Ja. I remember. You said dot you vas going to destroy all der natural enemies uf insects. Und vot aboudt id?"

"I have," replied Dr. Riis.

"Vell," said Prof. Pfeffler, "if you are going to start dot again I vill go."

"No, no, my dear Herman, wait. Possibly I misstated it a bit."

"Thank you."

"As I said, I possibly misstated my affirmation. It might be more correct to say that I have evolved a species of insect which is immune to most natural insect enemies."

"You haff? Vell dot is inderesting."

"That insect you just saw come out—the *Rex Orbis Terrarum*—is the first specimen to exist. He combines all the defensive and offensive qualities of the insect world. It took eight generations under laboratory conditions, to get him. Ordinarily he has two generations a year.

"However, this little specimen is better equipped for the struggle for existence than any other living thing in the world's history. He flies, runs, and can live under water. He can go for long periods without food or water, his bite is poison, he can sting, he has an offensive odor, he has an exceptionally tough armor, he is unpalatable, he can stand climates, ranging from Arctic to torrid, he can live with equal ease in glaring sun or total darkness; in short, anything less than an automobile wheel or nitric acid would be quite harmless to him. If swallowed by a bird, he will poison the bird, then eat his

*Scientific name for the order including beetles.

way out after leaving his eggs in its body. He is more prolific than even the most prolific insects; in fact, in a short time he would be up against the same difficulty that the oyster would be up against,—a scarcity of material to be made of."

"Und how," asked Prof. Pfeffler "do you know dot all dis iss so?"

"His immediate parents" replied Dr. Riis, "ran through the gauntlet of the tests. They produced about 50,000 eggs, 50 of which I have preserved. The little larvae are hatching now—even the eggs, my dear Pfeffler, are tough. If eaten they pass through a bird's system like a grain of sand. Well, now let's see how our infants are coming on."

Going once again to the big cage the two scientists found that almost all of the larvae had metamorphized and the rest were about to come out.

"If dis iss true," said Prof. Pfeffler, rubbing his hands together, "ve vill be famous, Dr. Riis."

"I don't think so," answered the other. "I shall make the tests for your benefit and then kill every one. It wouldn't be exactly nice to have these things turned loose."

Suddenly Prof. Pfeffler had an idea.

"Let us take dose over to de laboratory und apply the tests there. Id vould mak a good topic for mein *Dummkopfs* to write an oxberiment baber upon."

"Well,—all right," agreed Dr. Riis. "Your class begins at 11? Then if you will help me, I will do it."

TWENTY minutes or so before class time early students might have observed two elderly gentlemen, whom they would have recognized, as being on the Faculty, crossing the Campus toward Biology Hall carrying a large glass cage between them. Inside fifty little yellow beetles with short stocky legs and heavy wing cases preened themselves and essayed to climb the glass walls of their prison.

Half way across the Campus Prof. Pfeffler suddenly set his end of the box down.

"Sssh—" he whispered "it's a *Callidrayas Eubule*—on dot vaste can. Your handkerchief—*mein Herr Doktor*, und I vill haff him!"

Crouching low he began to stalk the butterfly while Dr. Riis sat on a nearby bench and watched. Closer and closer he crept, when without warning his prey darted into the air and fluttered a dab of brilliant color, a yard above Prof. Pfeffler's head.

"*Donnerwetter!*" growled that person and forthwith took after his quarry. *Callidrayas Eubule*, however, flew high and the best Prof. Pfeffler could do was to run in erratic circles with his eyes upraised. And so it was that he did not know where he was going until he heard a cry of alarm from Dr. Riis, a smash of shattered glass, and he was thrown headlong to the ground, his feet tangled in the cage of *Rex Orbis Terrarum*.

Dr. Riis rushed to the scene in alarm. He helped Prof. Pfeffler up and then began to look excitedly through the grass. A good dozen of the new beetles had escaped — some were already opening their wing cases in preparation for flight. Dr. Riis became frantic. He scooped up the creatures in spite of bites and stings, and jammed them into his pockets, his hat, the box. Prof. Pfeffler, catching his fear, halloed lustily for help while he held his barked shins.

Several students came in answer to his cries and aided in the search. The insects seemed unable to fly yet—their wings were still damp and so finally all seemed to have been recaptured. Tying a handkerchief over the broken glass two students shouldered the cage and carried it to the laboratory. There the first thing Dr. Riis did was to take a census. There were only 48 beetles in the cage—it fell short of just two to make the full number.

Neither Dr. Riis nor Prof. Pfeffler had any heart in the demonstration that followed. While the former extolled the virtues of his pets, the latter fidgetted nervously and gazed out of the window. After a moment or so he took up a pencil and pad and engaged in writing busily for some moments. In the meantime, the survivors were all executed by the simple expedient of filling their jar with chlorine. Keeping a few samples for themselves, the two scientists distributed the remaining corpses to the student body. As Dr. Riis finished this his friend handed him the sheet of paper. Dr. Riis looked at it with an expression first

of surprise and then of horror. Finally, he turned to the student body and in a few brief words explained the accident of the morning.

"If those two beetles are not captured or killed within a few days," he explained "they will lay about fifty thousand eggs. These will hatch near the end of this summer into 50,000 beetles, since the eggs are practically invulnerable to animal or insect attack. One out of every two of these producing 50,000 eggs will result next spring in 1,250,000,000, which will get busy at once so that at the end of the Summer the Third Generation will number 31,250,000,000,000. I perceive, gentlemen, that you do not see the serious consequences of what I say. Thirty-one trillion of these beetles will completely devastate the country. Then, if the Third Generation is allowed to multiply unchecked, which will be beyond the power of man to prevent, the Fourth Generation, two years from now, will produce 781,250,000,000,000,000—Seven hundred and eighty-one quadrillion two hundred and fifty trillions of *Rex Orbis Terrarum*. One, for every three square inches of the Earth's land area. Why, in one day every blade of grass, every leaf on the earth will be eaten up. Other insects, mammals, birds or reptiles will be either killed outright by the swarms of beetles, or will die of starvation in the desert the world will be after the Fourth Generation has starved itself to death. If the First Generation ever gets a start we may all make up our minds to die the Summer after next. The only way we can save ourselves and the world is to catch these two wretched insects, which are on the Campus, and exterminate them!"

The News is Out

DR. Riis paused and wiped his brow. The assembled students moved uneasily and whispered together. Varied were the receptions given his words. Some seemed inclined to scoff; some apparently took it seriously and whispered together in frightened tones, but the great majority simply stared, quite uncomprehending.

Prof. Heffler whispered to his colleague: "Say somedings! If ve don't make dose blockheads hunt for der *Coleoptera*, ve iss doomed! Tell the loafers you vill give extra credits to any biology student vot finds dem. Dot iss der only ting that vill move dem!"

Dr. Riis arose again and offered the suggested reward. The answer this time was more positive. As soon as the period was over they bolted for the Campus in a body. The two Professors stayed in the laboratory to await results. Prof. Pfeffler engaged in viciously transfixing the dead *Rex Orbis Terrarum* with pins, for his collection. Dr. Riis, by the window, spoke:

"The chances are a hundred to one that our specimens will not be found. They will take wing and fly—no one knows where. We must plan ahead, for the day when the Fourth Generation begins to hatch. If we have stored vast quantities of food, enough for several years, the human race *may* be able to live through the period before it can plant again. But it would require bumper crops for several years, and after that careful husbanding of all food. Herman, if our specimens are not captured, and the worst comes, there is a chance of the race surviving, if they are warned in time."

Prof. Pfeffler looked up, a stabbed beetle in one hand.

"Ja", said he "und if ve warn dem you vill not only be hooted all ofer de country by der Press, but vill probably lose your job as incompetent dreamer."

"But consider," pursued Dr. Riis "if they are not warned it will be too late. I must. What if I do lose my job? I have enough to last two years, besides the Second Generation will have everyone so scared that the University will be closed anyway. No, Herman, job or no job, we will have to give warning."

"Vell," said the other "how are we going to go aboudt id? Newspapers? Government? Scientific journals?"

"Maybe—the Government will help most—if it believed, but it would be the hardest to convince—the newspapers—"

Suddenly the door flew open and a group of excited students entered.

"We have got your bugs!" cried the leader.

Both men leaped to their feet. "Are you sure?" demanded Dr. Riis. "Absolutely—

spotted them right away; here they are—All three!"

Dr. Riis stopped in his track and looked with disgust into the open hands. "Earwigs!" he snorted, and returned to his friend. The students glared after him with disappointment.

"Vell, ve might just as vell go ahead und warn der vorld," said Prof. Pfeffler, ignoring the young biologists. "On dis Campus dose *Coleoptera* are as safe as if dey vas in your cage."

The students left and Dr. Riis, entering his office took up the telephone.

"The newspapers—which?" he paused.

"A nephew of mine works on the Times" said Prof. Pfeffler, "call dem op und I vill spik mit him."

A moment passed, then "Ja, ja. Hello. I vant to spik to Fritzie Pfeffler—Ja—Hello? Iss diss you, Fritzie? I hav der grand scoop for you! Mein friend here, Dr. Riis, has discovered a *Coleoptera*—no, no, not Cleopatra—*Coleoptera*—beetle. Und he has—.'"

CHAPTER III

The First Invasion

THE coming of the Fall Quarter brought its usual trainloads of returning students and professors to the University. And on one of these came the famous Dr. Peter Riis and his equally famous colleague and supporter, the Hon. Prof. H. Ludwig Pfeffler. Neither smiled when they noted the crowd of students at the Depot.

Prof. Pfeffler spoke to Dr. Riis. "Der next time," he said heavily, "you make an epoch making discoffery, do your own telephoning aboudt id."

Dr. Riis made no answer for thru the window he saw students watching them and he heard the words shouted, "Rex Orbis! Rex Orbis!"

"Let us not get off," said Prof. Pfeffler, "ve can stay on to the next station und den take a taxi."

"Go ahead if you want to," replied Dr. Riis in a not too pleasant tone, "you were the one that had to go and call up your crack-brained nephew. Those headlines will shame me to my last day! '*Professor Discovers Bug.*' Our distinguished entomologist, Dr. Peter Riis, has after years of patient toil isolated the Cleopatra Bug, which is going to destroy the world."

"If dose two wretched beetles had only lifed und multiplied," groaned Prof. Pfeffler, "ve vould be vindicated. But now—ach! mein Gott! Listen to dot!—" This as the train finally stopped and the sounds from a crowd of biology students became audible. "*Rex Orbis Terrarum!* The world is doomed!—"

"If I can get their names," growled Prof. Pfeffler, entering the aisle, "I vill haff dem exbelled."

When the two arrived at the apartments they shared together, Dr. Riis was informed that the President of the University wished to see him at once. Leaving Prof. Pfeffler to unpack, he hurried to the President's office.

Many and varied were his thoughts as he walked across the Campus. He would be reprimanded, probably. He wouldn't really be censured for as head of the Biology Department his resignation, which would follow such a scene, would be harmful to the University. But he would be informed, in the peculiarly sarcastic manner that the President could assume, that he had overstepped his duty, and that he had harmed the University's reputation. He would be advised to confine his researches to his own rooms.

Regaining his composure by an effort he went on to the President's office. He entered and was immediately shown to the inner room. The President behind his desk, stood up.

"Good morning, Dr. Riis. So glad you came at once. Won't you have a chair?"

Dr. Riis sat down. "You wished to see me?"

"Yes. About your insect creation—"

"I have only one thing to say about that, Dr. Spencerman. My recent researches with the *Coleoptera* were not conducted with the intention of creating any sensation. I introduced my specimens into the laboratory as an interesting demonstration for the classes. Our unfortunate premature tele-

phoning to the *Times* was the result of a natural fear. That fear, it seems, has fortunately proven groundless. I merely wished to say that—"

Dr. Spencerman interrupted him: "Before you continue, my dear Dr. Riis," he said, with an odd expression, "would you mind identifying this beetle?"

He held out his hand, containing a small dead insect. Dr. Riis looked.

"Where did you get this?" he demanded, quickly.

"You recognize—?"

"*It is Rex Orbis Terrarum!* Where did it come from?"

"The Campus. I picked it up yesterday. Later I examined some of the trees. I found numbers of these insects—" He paused.

Dr. Riis looked again. He closed his eyes for a moment.

"Well?" asked Dr. Spencerman.

The other touched his eyes with his fingers and shook his head as tho trying to drive away a bad dream.

Then—

"This is the first generation, Dr. Spencerman. They number fifty thousand. Next Spring will find one billion two hundred and fifty million—It is simply a question of geometrical progression."

"And then—"

"You are as good a mathematician as I am."

Dr. Spencerman laid the insect on his desk.

"You take a rather pessimistic view. If, as you said, the fourth generation would soon die because of lack of food, why couldn't we store enough food to last thru that time?"

"If they would start now to save and prepare, they might. But you recall the results when Dr. Pfeffler and I tried to warn—"

"I know. But as President of the University—" "You would only attract the more ridicule," finished Dr. Riis. "Well," said Dr. Spencerman, "I can send notes to the Chairs of Biology of one or two neighboring Colleges, inviting them to a conference. Then we could present your evidence, and with their backing—"

"If they learned what the Conference was about, they would not come. Our trying to warn people is simply a waste of time. Personally I am going to move to Northern Alaska next Summer, where I can make observations until it is all over. Then, if anyone, is still alive I may come back. Do you want to come with me?"

Dr. Spencerman shook his head, in a gesture that meant many other things besides a negation. He strode to the window.

"I can appreciate your position, Dr. Riis," said he. "But I am going to call a conference. I believe that a group of scientists like those I have in mind will convince people."

"Very well," replied the other. "If I can be of any service I will gladly help." He was at the door. "And good day."

THE results of Dr. Spencerman's conference are too well known. Taking Dr. Riis' advice, the President did not clearly define its object so that several of the Professors were not at all sure what it was about. It is surprising that they came at all.

Everything seemed to be going well until Dr. Riis was introduced as the chief speaker. At that, fully half of the delegates arose and left in disgust, declaring that they would not be party to such 'sensational idiocy!' Only one stopped to condole Dr. Spencerman, and even he expressed the hope that as soon as Dr. Riis' bad influence was removed the President might be freed from this foolish fear.

And then came the newspapers. Dr. Riis resigned, and accompanied by Prof. Pfeffler, who had done likewise, retired to the former's summer home on the Lake. By the time the Conference had ended Winter had begun. The most thorough search failed to reveal a trace of *Rex Orbis Terrarum.*

By the time that the next Spring came around, the public had completely forgotten the '*Rex Orbis Terrarum* farce'. But in the minds of at least three people it was far from the least important thing. The two who had introduced the beetle into the world returned to town very quietly and went at once to the President's office. Dr. Spencerman, to whom they had previously phoned,

met them at the door. He carried a long pin in his hand. On its end was a diminutive yellow beetle, quite dead. Dr. Riis regarded it.

"This season's crop?" He asked, quite calmly.

"Picked it up a couple of hours ago in my garden," replied Dr. Spencerman. He returned to his desk and brought a small brownish larva. "Is this any relation?" he asked.

"It is the larva," replied Dr. Riis, without enthusiasm.

"I suppose they will start coming out in force soon?"

"If it is warm the first regiment will begin the invasion tomorrow. Then—"

"Vell, leds go to der theatre tonide." said Dr. Pfeffler, stepping suddenly upon another *Rex Orbis Terrarum* that had lit on the porch beside him.

Dr. Riis spoke the truth when he prophesied the coming of the insect vanguard on the morrow. The forenoon was hot and sunny, and the afternoon was still young when *Rex Orbis* began to come. From under stones, bits of wood, from the trunks of trees, bushes, from under lumps of sod, came the yellow insects. They seemed to materialize from thin air. Inside of two hours one could not walk a hundred yards on a vacant lot without startling literal thousands into flight. Dr. Riis and his two colleagues watched the awakening from the President's porch.

Crowds of students hastening from one afternoon class to another, stirred the creatures into flight by the thousands. At first they seemed unnoticed, and then the watchers saw students attempting to pick the creatures up, but dropping them suddenly as they were stung.

Some Zoology students stopped to examine them. There were shouts back and forth—a sudden commotion. Dr. Riis heard his name mentioned. A little group, huddled together, broke and started for the President's house. The three there waited silently, knowing what was coming. The leader of the advancing group carrying an insect, gingerly in one hand, suddenly pointed and cried—"It is Dr. Riis. Where did he—" He broke off, at the porch, and held out the specimen. Asked the question breathlessly.

Dr. Riis drew himself up. "This," he replied, in his best lecture room manner, "is a member of the second generation of *Rex Orbis Terrarum*. By tomorrow at this time there should be one billion two hundred and fifty million within five hundred miles of the city. But I believe I have already explained the beetle to you and numerous others here."

He turned to Dr. Spencerman. "Shall we go in?"

They left the students gaping, amazed. Other speciments were brought up. There was no scarcity of them. That they were the new insects Dr. Riis had had a year ago, there was no doubt. Too many remembered the details.

One billion two hundred and fifty million! Over half as many as there were people in the world!

A crowd of students hung about Dr. Spencerman's house until evening trying to get to Dr. Riis, but the latter did not show himself once. "Things," said Dr. Riis, "may become very unpleasant for us, and the insects will not be directly to blame."

Strychnine in Coffee

THE next morning that part of the world which subscribed to The *Times* and the other morning paper, was aware of the arrival of *Rex Orbis Terrarum*. No murders or divorces had occured within the last twenty-four hours, so without exception Dr. Riis' insects were given headlines. A double panel picture of the beetle and its creator and below was a purely fictitious interview with the savant, giving all the information on the coming two generations. In the main, it was accurate for many students' notebooks had contributed, and when Dr. Riis read it at his breakfast table he nodded his head in approval.

Prof. Pfeffler started to ask him what unpleasant thing he had anticipated, when the door bell rang. "Reporters," said Dr. Riis, and answered it.

It was. Two reporters and a photographer. Dr. Riis invited them in, quite graciously, and said he was ready to answer any

questions. For twenty minutes he was interrogated and then the question he had expected was put:

"What is your advice to the world to escape the effects of this coming plague?"

"Arsenic or strychnine."

"Ah, that's good. You have the solution to the problem already. And in what form would you administer it. As a spray or in food?"

"In food."

"Would it be—liquid food, or—"

"Personally I would prefer coffee."

"Coffee? But—"

"It depends altogether upon one's taste. Some prefer chocolate."

"Your insects prefer chocolate? You are joking, Dr. Riis?"

"Not a bit. I am quite serious. If people do not want to die of famine or insect stings, they had better take strychnine."

"What, come now really, you said something about storing up food—"

"Well, where is the food to store? Last Fall's harvest is almost all gone now and there is not enough canned or frozen food to last the world six months."

"But next Fall there will be a harvest."

"I am sorry. There will not be any harvest next Fall. Know how many insects will hatch out about eight weeks before harvest time?"

"You say 'thirty-one trillion', but that many could not affect the harvest beyond a small locality—"

"You don't know what thirty-one trillion beetles can do. When a few hundred million locusts go across country they denude whole counties. The third generation will do everything but knock the country flat. It will make America an example of what the world will be next Spring. Well, I will give you a few hints. This generation has just come out. They will lay their eggs in about two weeks. If all transportation between this State and the rest of the country is cut and everyone that has a gun is sent to the borders to shoot all birds and animals that try to cross, you *may* be able to curtail the third generation. You could also try poisons—ordinary insecticides are useless. Try chlorine, carbon monoxide; spray nitric or hydrochloric acid on the eggs; if everyone works to the utmost all Summer, the third generation might possibly be reduced in number. It is a very slim chance. But at present, it is the only one. Allow me to restate, strychnine in coffee is very effective in preventing insect annoyance."

The interview was published in full in all papers, but as far as results went, it was valueless. The Governor of the State refused to take any action. The Interstate Commerce Commission refused to even consider the matter, and as the Legislature had adjourned for the Summer and its members were either acquiring a coat of tan or many trout, nothing was done. There was, however, a notable increase in the sale of insect poisons and several chemists' supply houses received large orders for bottled chlorine and nitric acid from persons who were very evidently not chemists.

The second generation was short lived and by the 1st of July its last member had vanished from the face of the earth. The sun shone down upon a world where only grasshoppers and butterflies flitted over the ripening crops. And as the warm days of Summer passed, people forgot the scare and Dr. Riis and lived blithely on.

CHAPTER IV.

Desperate Days

THE vanguards of the third generation came in the middle of August. They came slowly at first and then faster. The prominence the papers gave to the creatures was in direct ration to their hatching period. On the second day there was a paragraph on the back page between Miss Velma Lee Fritts' wedding and a patent medicine testimonial. The next day the second page beside the marine news column—then as the beetles continued to hatch in ever increasing multitudes, the panel of the Spring before was dug from the morgue and put on the front page with small headlines. But by that time, things began to happen. The farmer who went to bed chuckling over 'thet dern fool' Dr. Riis and his bugs, awoke to find the sky black with tiny flying things which settled upon his fields like the locusts of the Old Testament.

Orchard owners found their laden trees breaking under the weight of insects. Autoists were compelled to stop when their windshields were covered with bodies and their radiators clogged with *Rex Orbis Terrarum.*

To the Department of Agriculture at Washington, poured telegrams from individual farmers, from cooperative packing and canning houses, from the wheat fields of Minnesota to the powerful California Citrus Association. All cried for help. A plague of beetles was sweeping over their fields: their crops would be destroyed; all poisons they tried were useless. Telegrams were dispatched to Dr. Riis. At first they asked him to verify descriptions, then they begged him for some antidote; finally their tone changed and in threatening words he was commanded to stop this plague, which he had caused, or be responsible for the consequences.

When he read the latter communication from Washington he smiled grimly.

"That," said he to Prof. Pfeffler, "is what I meant when I said unpleasant things would happen. When they see how foolishly they have acted they try to lay the blame on me. When shall we depart for Alaska?"

It soon became apparent that the depredations of the third generation were not confined to the United States. Mexico was treated to a similar plague, and the insects infested even the jungles of Panama in noticeable numbers. This rapid spread could be explained only by their tendency to spend most of their lives in flight. Cuba telegraphed that her sugar crop was ruined, and even islands in the Antilles where ships touched from the States, had smaller numbers of insects. Hawaii was devastated; somehow, members of the very first generation must have been shipped there. After weeks of frantic waiting England, France, and Italy simultaneously reported the insects, which for some unknown reason did not hatch until later. But abroad, the plagues were not as serious, for vast as thirty-one billion is, it was not great enough to devastate the whole world. It remained for the fourth and last swarm to finish the work.

A week after the first plague had swept the country, the swarm reached its maximum. All the eggs were hatched; the insects had only to live out their six weeks of life, lay their eggs, and die.

As may be expected, every effort was made to fight the creatures, but it was a hopeless job, more hopeless even than the blockade Dr. Riis had suggested in the Spring. After two weeks of it large areas of the country where the plague was the worst, were placed under military government, and many millions of dollars were spent on poisons; airplanes to spray them and thousands of men to seek out the newly-laid eggs.

In Iowa a belt of many thousand acres of wheat was burned in an attempt to arrest one of the swarms, but of no avail.

Dr. Riis shook his head sadly at all this and put in big orders for canned food to be sent to the little Mission at Fort Yukon on the northern bend of the Yukon River. At Dr. Spencerman's suggestion a large radio was included in the outfit to catch, as he put it, the last cries of humanity.

The last cries of humanity, however, did not require radio to make them audible to Dr. Riis. Telegrams and letters reached him in mounting numbers, containing appeals for help and threats of vengeance.

"You have ruined my crops. You have made paupers of my children. I am coming to kill you!" wrote one farmer. Dr. Riis asked for a police guard, and bought tickets on the next boat sailing for Skagway. Dr. Pfeffler, after being assaulted once, resorted to a grotesque disguise when outside. Even the President was not safe off the Campus, and the newspapers gave scant sympathy to him. *The Times* which had been the most caustic the year before, now heaped abuse upon the unfortunate trio without cessation. "Cowardly scoundrels who loosed death upon the world and then fly like the cravens they are before its consequence."

FOR several weeks the plague did not directly affect the cities. Their skies were not darkened and no one's living was visibly hurt by *Rex Orbis Terrarum.* But it was not long before the big wholesale commissary companies, seeing their supply of raw foods seriously curtailed, prepared

for the morrow by advancing their prices. The advance was sudden and very stiff. Fresh vegetables went up first; then flour; butter and other animal products soared the highest, as the food supply for cows was cut off. Even the price of meat advanced.

Now the trouble of which Dr. Riis has spoken began in earnest. When Mrs. Smith, going to the corner grocery, found milk 25c a quart and butter $1.10 per lb. she raised that grocery store's roof. And when flour began to cost 20c a lb. and sugar approached the coffee it flavored in price, the clamor the farmers raised became tame in comparison to that of the city dwellers. Thousands found themselves dependant upon canned fruit and meat for their subsistence, so expensive had become the staples.

And finally to cap the climax, big manufacturing plants seeing that the very world was going to close business, began to shut down in advance, throwing thousands out of employment.

The result was a terrific social unrest that threatened to speedily become anarchy. Soap box orators materializing seemingly from nowhere, like the beetles, attracted vast crowds of the hungry and jobless.

Especially in the big cities of the East, where there were large masses of ignorant foreigners, the appeal of the soap box orator was profound. The police were helpless. In Birmingham a great revival was started among the negroes and it swept thru the South on the heels of the departing plague. Hungry looking individuals took to hanging around Dr. Riis' house and refused to be driven away. He considered moving to a downtown hotel until his boat left. Dr. Spencerman, at the insistence of his wife, moved into one of the big Dormitories, where the presence of several hundred loyal University boys assured him safety.

In the meantime, the scientific minds of the world were brought to bear upon the problem. Huge rewards were offered in every country and many came forward to claim them, but none of the suggestions were practicable. One by one the scientists lost hope, and tho keeping doggedly on they knew they were beaten. There were seven hundred and eighty one quadrillion of *Rex Orbis Terrarum* eggs in the world, and unless those eggs could be destroyed, the coming of Spring would be the end.

With the arrival of the first breath of Winter, the third generation vanished as suddenly as it had come, leaving ruined crops and a terrible cloak of fear over the world. Dr. Riis and Prof. Pfeffler, practically prisoners in their house, sat at the window in company with Dr. Spencerman. For many minutes none of the trio had spoken. The cold grayness of the Autumn day had seemed to enter their souls. The brown leaves falling in eddies earthward carried with them, to their eyes, the last hopes of humanity.

Dr. Riis spoke: "You know, I was thinking just a little while ago of an interesting thing. This time next year we will all be gone. Excepting the fish and a few Arctic animals—perhaps some Eskimos; the whole planet will be void of life. But our civilization, the great cities, ocean liners, highways, will stand like monuments for thousands of years. Perhaps some day away in the future, the archaeologists of a new race will be digging into our kitchen middens and writing learned treatises about the pre-plagal period'."

Dr. Spencerman nodded his head slowly. Prof. Pfeffler gazed out of the window unhearing, a peculiar expression on his face. As Dr. Riis became silent his colleague took up his discourse.

"Yes, I suppose so. It is just about the finish now. I wonder if they will ever get the true story of how it started? A scientific experiment performed as a result of an argument; then the world's leaders stubbornly blinding themselves to the one salvation. And now the two who might be called responsible are kept from a violent end only by the fast weakening hand of Authority. It won't be long until that Authority itself will be willing to rend you."

Dr. Riis attempted to laugh with a sorry result.

"Bah! What is the use of civilization if it vanishes at a hint of danger and leaves—animals? I am going to Alaska until the last one is stung to death; then I'll come back and write a history of it for any chance

visitors from another planet. Will you join us Dr. Spencerman?"

Sudden Flight

THE President shook his head. "No. I have a family and many responsibilities. I have stored enough food to last two years and with the house properly barricaded I think we can live thru next Spring."

"Well," answered Dr. Riis, "next Fall we will come back to conduct the world's *post mortem* and if you don't survive we will give you decent burial."

At this Prof. Pfeffler suddenly came to life.

"I tink," said he, "dot ve vill come back early in der Spring. Und dere wont be any *post mortem* to conduct."

"What do you mean?" demanded Dr. Riis, surprised.

"I mean," responded his friend, with perfect equanimity, "dot I haff found der solution to der problem. Der vay to remofe *Rex Orbis Terrarum* before he become too troublesome."

The other two sprang to their feet. "How? Explain!" they cried in one breath.

"Quite elementary," said Prof. Pfeffler. "Ve fight fire mit fire. Against der great numbers of der beetles ve vill turn efen greater numbers of der enemies—der bacteria! Ve haf only to find one dot kills *Rex Orbis Terrarum*, breed into him certain qualities of rapid reproduction, und der broblem iss solved."

"Why—" asked Dr. Spencerman, "you are right! It will work!"

"Of course it vill vork," responded the head of the Department of Physiology, "oddervise I vouldn't haf thought of it. I vill take specimens uf all possible tybes of bacteria to Alaska; breeding tanks, microscopes, electric light plant—everything necessary to conduct bacteriological research. Ve vill isolate our tybe dis vinter und next Spring ve vill kill off your pet beetles, mein Herr Doktor."

* * * *

In the days of waiting before the ship sailed for Alaska the two savants proceeded to assemble the necessary supplies for their researches. Most of these were procured at the University, but some of the purchases necessitated trips down town. Upon one of these trips Prof. Pfeffler was recognized, and narrowly escaped assault by some of the half savage laborers who filled the city. A larger police guard was assigned to Dr. Riis' house and the two decided not to venture out again until the boat left. As Dr. Riis said, "the dark clouds of humanity's displeasure were lowering upon them." It would be but a matter of days before a tempest would break upon the two.

Finally the day before the boat sailed the storm broke. A mob appearing from downtown and growing as it progressed, bore down upon Dr. Riis' house. Two students warned him a few moments in advance, and offered their dilapidated Ford for transportation. The two professors loaded their suit cases into the back seat and beat a noisy retreat down the alley as the advance guard of the crowd reached the front door.

Disregarding all speed regulations they drove a score of blocks, and then stopping at a drug store entered to telephone back to Dr. Spencerman. But he was already warned, and with his wife, was preparing to move to a Dormitory. As Dr. Riis hung up there was a commotion in front of the Drug Store. A crowd of men entered led by the druggist. Dr. Riis understood at once. The druggist, recognizing him had gone into the street while they were telephoning and had summoned some stragglers from the mob. More like jungle beasts than the civilized beings they had been a few weeks before, the mob charged the two whom they held responsible for their misfortunes.

"Der luggage!" cried Prof. Pfeffler, and then he had to think of something else. Dr. Riis, who had more presence of mind, ducked behind a counter and expertly aimed a bottle of Listerine at the light. Unfortunately he missed, but the Listerine landed in the upraised face of the druggist and so did almost as much good as if it had struck its objective.

Then, dragging Prof. Pfeffler after him, he ducked for the back room. Here he first switched out the lights, and then taking an immense carboy of Castor Oil, he

smashed it on the floor in front of the door. Prof. Pfeffer started a question but he was given no chance.

"The window," whispered Dr. Riis. Groping blindly, Prof. Pfeffler seized an apothecary's mixing bowl and heaved it thru the pane. Suddenly the druggist, wiping a mixture of blood and Listerine from his face, appeared. Cursing incoherently he started towards them, without warning he landed on the floor with a bump. The others crowded after him, but they too slipped, grappled frantically bringing down a shelf of bottles and fell into the spreading pool of slippery Castor Oil. By this time Prof. Pfeffler had one leg thru the window. Grabbing anything within reach Dr. Riis bombarded the figures silhouetted against the door. Momentarily they desisted; that moment was enough, for dropping ten feet into a pile of tin cans, plaster and nettles, the two scientists made their escape.

Prof. Pfeffer was for making it the rest of the way on foot. But finally they returned to the front of the drug store. A small crowd had collected about the door, completely ignoring the Ford. While from within the store came the sounds of a mighty struggle, intermingled with the crash of bottles and human voices. Unobtrusively slipping into the Ford, Dr. Riis and Prof. Pfeffler rolled away by gravity, leaving the ignition off for several blocks. As Dr. Riis finally turned it on, Prof. Pfeffler, looking back, described the form of the druggist completely covered by a variety of medicines, being dragged forth to the cries of "String him up! String up the dirty professor!"

CHAPTER V.

The Last Stand

DR RIIS replaced the thermometer on its hook and redonned his mitten. "Forty below." He announced thru a cloud of steaming breath. Prof. Pfeffler scrutinized the instrument closely. "Forty-vun," he replied, glaring. "Leds go inside oudt of dis beastly kalt." Closing their cabin door upon the blackness that was midday, Dr. Riis turned on the radio. Thru the intermittent crackle of the Northern Lights, came the voice of the announcer far to the South.

". . . . the news that word had unofficially come from the Rockefeller Institute that all hope has been given up, has precipitated serious rioting in several Eastern cities . . . . the Red Cross has been partially successful in combatting the famines in the Pennsylvania coal regions . . . . word has been received from India that all remnants of British authority are gone, and an unestimated number of whites and natives have been killed in rioting . . . . the announcement that Ford and General Motors have suspended operations indefinitely, coming as it does on top of the closing down of all the Standard Oil Companies, has been the most serious blow to finance during the past three weeks . . . . "

Dr. Riis switched it off. "We had better get to work, Herman. It is nearly February now. Let us see how your pets have responded to the albumen test."

Leaving the radio the two entered thru a door which had been heavily padlocked. They found themselves in a room as different from what one would expect in their log cabin as the noonday darkness was from the daylight of the South.

Its walls were lined with racks of test tubes, of flasks, of shelves of bottles. On a rough table in one corner was a glass tank of water with an electric lamp and a number of phials submerged in it. A powerful compound microscope stood upon its case beside a well-filled slide box. Prof. Pfeffler at once took one of the bottles from the tank of warmed water and taking a drop with a pipette he placed it on a slide. He looked and gave an exclamation of satisfaction. While Dr. Riis was looking his colleagues went to a wire cage in one corner and brought forth a small yellow beetle which was easily recognized as a member of the species which was causing so much trouble. Placing the creature in a jar he put a drop of the culture upon a piece of canned fruit; then he placed it in the jar. Almost immediately the beetle began to devour it.

"If this mutation," murmured Dr. Riis,

"holds true for only a few cycles it will be enough."

Some hours later they returned to the laboratory and examined the beetle. It was stone dead. Wearily the two smiled at each other. Then without another word they went to their bunks, and in a moment were sleeping the sound sleep of exhaustion.

The warm breezes of April had reduced the Yukon River ice to a few small floes and chunks when the two scientists took their departure. They chartered an airplane and flew to Fairbanks, taking only a dozen sealed phials of all the apparatus they had brought. After resting a few days at Fairbanks, they took the train to Seward. There they remained over a week before they could sail out on a Seattle bound steamer. The regular boats had been taken off the Alaska run, and the little steamer they fround themselves on took some fifteen days to make the voyage. Consequently, it was well into May when they arrived at their destination.

The city was utterly unlike its appearance when the two had left. It had an odd, unkempt, deserted appearance about it, and was strangely silent. The streets were filled with haggard, hungry looking people, who hung about the docks quietly in crowds. The streets were all but empty of cars, while the street cars ran but irregularly, and even the taxis were not in evidence at the dock. As soon as they had disembarked, the two pulled their hat brims well down and trudged uptown until they finally located a cab.

Taking no chances on telephoning now they sped at once to the University and after paying the exorbitant fee of $8.00 to the driver of the cab, they found themselves in front of Dr. Spencerman's house. The front windows were boarded up and Dr. Riis feared the worst, when suddenly he saw the President himself coming out from behind the house. He was dressed in old clothes and carried a revolver in a holster at his hip.

"What d'ya want here?" he demanded in a voice utterly unlike his own.

"Dr. Spencerman!" cried Dr. Riis, in amazement, and rushed forward.

GREETINGS over, the two explained their coming. "We have got the remedy—or rather Dr. Pfeffler has." Reaching into his vest pocket he drew out one of the phials, filled with a thick yellowish liquid.

"This," said he, "is the antidote for *Rex Orbis Terrarum*. It is a form of bacteria which we have been calling *Mors Regis* because that is just what it does to the beetle—kills him. It is a mutation from a common species of bacteria which has a peculiar power of secreting a toxin violently poisonous to *Rex Orbis*, and its rate of multiplying, or rather dividing, is greater than that of the beetle. When nourished, each bacteria will divide once every hour or about 80 hours when they will number approximately 500,000,000,000,000,000,000,000—five hundred sextillion, or more than 625,000 per each *Rex Orbis Terrarum* of the fully hatched fourth geeration."

Dr. Spencerman gasped. "But what then?" he asked, "if all the fourth generation is killed, won't the bacteria keep on multiplying until they do the same to the world that the insects would?"

"Yes, we thought of that," admitted Dr. Riis, "and experimenting we found that after the 80th generation I mentioned, the tendency is to revert to the original type, which is, as you know, a very inconspicuous and harmless member of the plant kingdom."

"How much of the culture have you?" demanded the President.

"A dozen fifty gram phials. In the laboratory it will take about two days to prepare to start shipping to various parts of the world. Is the telegraph still operating?"

Receiving an affirmative the three walked post haste to the Biology Hall of the University. The place seemed deserted, but Dr. Spencerman told them that a few advanced students were still at work trying to exterminate the plague. Within they found these standing in a little group at one window and talking in low tones. Dr. Riis wasted no time but pressed a phial into their hands.

"This," said he, "is a bacteria that is death on *Rex Orbis*—they divide every hour. We

will want about 500 kilograms of them this time tomorrow. Buy all the extra equipment you need." He thrust a sheet of paper in their hands. "These are all directions for preparing the culture. Speed!" And he was gone.

As Dr. Riis had expected the telephone was out of order, so catching one of the errant street cars he returned to town. There he dispatched a telegram. Its wording is now famous:

> Department of Agriculture,
> Washington, D. C.
> Have developed bacteria which will exterminate Rex Orbis Terrarum. Am sending samples with directions for cultivation and distribution, by airplane. Send new cultures to Europe and other stations immediately.
> P. RIIS.

Then going to the Airport he found that the Air Mail was still running. Taking two more of the precious phials he wrapped them in excelsior, with the directions, and after explaining to the pilot in a few terse words the importance of the package, he caught another street car and returned to Dr. Spencerman's house.

Next morning fourteen generations of the bacteria had arrived and every available container in the laboratory was filled to overflowing. That day was filled with work for Dr. Riis and Prof. Pfeffler. With the aid of a score of remaining students, some thousands of phials were sterilized and filled with the culture. A stencil was made of the directions and Dr. Spencerman made the mimeographed copies of them. On the 20th of May some sixteen hundred bottles were sent off to every College and University in North and South America; to all the State Departments of Agriculture, and to the Orient. In the meantime, the news that salvation was at hand was broadcast by the newspapers. The effect was electrical. Vast crowds of people began to congregate about the University. The hopeless expression was gone from their faces, but there were no manifestations of joy at deliverance. Whenever either of the trio appeared, they were watched silently. It soon became very unpleasant. Dr. Pfeffler took to avoiding the streets.

"Dey make me nervous," he said, "like a kraut of hungry volfs. Ef ve succeed dey vill make uf us heroes. If ve vail, dey vill eat us op. I hope dose bacteria vill work."

However, Prof. Pfeffler would not be kept long in suspense. June would soon be coming and with it the fourth generation. The dreadful last generation of *Rex Orbis Terrarum* would come.

As soon as the Bureau of Agriculture at Washington received the culture their chemist began seeking a live *Rex Orbis Terrarum* to inoculate, in order to determine the effectiveness of the bacteria. But search tho they might not a living beetle could they find. Not one member of the third generation was alive. But this was no time to demand proof. Realizing at last that they must act on faith, the Government at once endorsed the culture and appropriated enough money to send it all over the world. Everywhere the little phials were received enthusiastically, as conviction began to come that the world was saved, and doubting scientists were forced into preparing the bacteria for distribution.

Nearing the End

HOWEVER, fortunately for the general peace of mind, the trio included, there was not a very long wait until the first insect should appear. By the 1st of June, the University had done everything in the way of preparation; vast quantities of the new bacteria were distributed to strategic points, where, without food, they were kept in a torpid state until the time should come for their 80 generation drive to defeat the beetles. Every square mile almost was covered; there remained nothing to do but to wait. About this time the heads of the Science Department of a number of other Universities came up for a short conference upon methods of distribution. Never was there such a change in maner as was evinced by those learned servants. When Dr. Riis took the floor there was prolonged cheering, and his every word was listened to with rapt attention.

By the fourth of June, however, the steadily warmer days warned the visitors that

the time had come for their conference to end. Very soon they would be needed at their own posts to take part in the great battle.

The majority of them returned by air, but a few had the unexpected pleasure of riding on a train,—one of the pioneer lines to resume service after the terror. In fact, throughout the world the tension seemed to be lifting. People resumed their usual occupations; street cars began to run regularly, and several hundred students registered for the Summer quarter. People looked to the day when the larvae would metamorphose, with interest, instead of considering it a horrible event which would spell doom for the world.

The weather remained warm. The sky clear, and this helped to raise everyone's spirits. At the same time, as Prof. Pfeffler observed, it raised *Rex Orbis Terrarum*.

On the 8th of June a telegram came, addressed to Dr. Riis, from Washington, D. C. —it read—

> Rex Orbis Terrarum appearing in Panama and South America. Bacteria being spread—no results as yet.

Later that night another arrived from the same source.

> Insects metamorphosing in Mexico and Egypt. Mors Regis used as per directions. Will advise further appearances.

On the 9th of June a telegram arrived direct from Mexico City.

> Insects appearing in great number. Crops threatened. Bacteria used but no results. How long is period of incubation?

And on the day after a long and frantic telegram from Washington:—

> Plagues of Rex Orbis Terrarum sweeping everywhere South of Tropic of Cancer. Serious in Mexico, Egypt and India. Insects appearing in Florida and Texas. Bacteria ineffective. What is the period of incubation — advise by telegram or radio immediately. Situation desperate.

When Dr. Riis read this last telegram he looked at his two colleagues with a very serious countenance. After they had read it, he addressed them:

"Under laboratory conditions the bacteria were fatal to the insect, but here something seems to be different. It may be that it will take a longer time to have effect, it may be—"

He broke off. Both the others understood. If bacteria did not take effect—

For the next few days telegrams and letters by the hundreds, poured upon Dr. Riis and Prof. Pfeffler. They were frantic-appealing. People were first confused, then suddenly terrified. Each day the plagues crept Northward, and tho millions of gallons of the culture were distributed as directed by Dr. Riis, there was no decrease in the numbers of insects. In Mexico City one day there was no sunrise; the sky remained black as midnight; black with the bodies of billions of flying creatures. The street lights were turned on, but to no avail. The sky remained as dark as tho the sun had gone out. The inhabitants, sick with superstitious terror, stayed indoors in prayerful prostration, listening to the roar of the beetles outside,—like the thunder of wind and hail.

In India the natives were more used to plagues, but they were not prepared for such as this. From Natal to Ceylon, the tropic noon was changed to a grey twilight, and the noise of the wings drowned out speech. The Valley of the Nile lived thru a repetition of Bible times, magnified a thousand fold. Restless clouds of *Rex Orbis Terrarum* ranged for hundreds of miles over the deserts of Arabia and Northeast Africa.

All thru the Northern hemisphere people began to move South. Australia, South Africo and Patagonia were still comparatively free from the ravages of the terrible fourth generation—there the end would be postponed by some eight weeks. And before that time, maybe something could be done! Something!

CHAPTER VI.

Last Words!

DR. RIIS and his two colleagues lived thru a repetition of the social unrest of the Fall before. But it was short. Communists who had successfully resisted the

efforts of the police to disperse them, scattered in a panic when a gust of wind blew a few thousand beetles down the street. From the Campus they arose steadily, relentlessly. Every one was forced indoors. Behind the windows in the laboratory, Dr. Riis, Prof. Pfeffler and Dr. Spencerman watched the hosts spring up as the magic warriors of Grecian legend sprang from the Dragon's teeth.

During the afternoon they roared thru the skies in every thickening throngs. The trees swayed as their bodies beat against them, and the swarms, instead of being carried by the wind, now made a small gale in the direction of their flight. About three P. M. a telegram was telephoned to Dr. Riis from Washington. It was brief. It read:

> Plague sweeping world. All hope given up. Bacteria useless. Work to the end.
>
> ADAMS,
> Secretary of Agriculture.

All thru the afternoon the insects hatched, and when night fell Dr. Riis expressed his belief that the majority of the fourth generation had made their appearance on earth. "During the first day," he said, "the insects would eat nothing, but on the morrow when their wings are dried they would begin to eat. And after that the vegetable kingdom would have just about five hours of life."

In spite of the fact that it was Summer, the shade of evening came fast. There was no sunset; its colors were completely obscured by a vast billowing yellow cloud of *Rex Orbis Terrarum*, trying out their wings. An airplane which had fought its way down to the City airport reported that as far as could be seen the earth was covered for a thousand feet with what looked like an ochre fog bank, out of which the mountains rose like islands.

When night came, with its chill, the greater part of the swarm settled to earth. A few people frantically attempted to destroy them by fire, lighting fields of dry grass, but the only result was to send vast droves of the creatures aloft, until finally the flames were smothered with their bodies. And so at last man's intermittent efforts ceased, and the human race retired indoors as tho to escape the horrible realization of the morrow.

With the landing of the insects the telephone went dead, but with Dr. Spencerman's powerful radio they were able to hear the last words of the race—so to speak.

These came from New York, center of civilization, where man's strongest stand against the invaders would be made. For once the program was not enlivened by music; the voice of the announcer was of sufficient interest to hold all. When Dr. Spencerman tuned in he was reading messages from the Continent. Plagues. Bacteria spread even after they knew it was in vain. Then with the coming of night, hopeless despair. Unless some one could do something, the morrow would be the last. News of suicides by those who could stand the strain no longer. News of a dreadful railroad accident caused by rails made slippery by millions of insect bodies. Of traffic piled up on roads leading into the Metropolis. Always the same. Disaster; desolation; death.

The three scientists, two of whom had such an intimate association with this, listened with an almost morbid interest. However, it soon became obvious that the broadcast would continue all night, so finally Dr. Spencerman, wearily turned the radio off and made ready for bed.

They would sleep well . . . .

All was over.

THE coming of the dawn brought the trio up early. At five, before the sun had appeared on the horizon, and while the morning chill kept the insect hosts on the ground.

The sky was remarkably clear. One could see for miles across wooded hills to the mountains. The venerable trees on the Campus were in full leaf; the lawn was brightly flowered. But over all like a volcanic *scoriae*, lay the yellow blanket of the insects, lying dormant waiting for the warmth of the sun to bring them into activity.

Walking out on the porch, his feet crunching the creatures, Dr. Riis picked up one

of the beetles. It was perfectly motionless; legs curled under, wing cases shut tight. Even its antennae were still. Dr. Riis looked at it a moment and then threw it away.

"This I suppose," said he trying hard to control himself by using stilted phrases, "is our last look upon this old world. In two hours—" He hesitated and then turning on his heel re-entered the house. The other two followed, understandingly. As the door closed he finished his sentence—"Let us eat, drink and be merry, for tomorrow—bring on the waffles!!"

They ate breakfast in silence, for the most part. At 6:30 the sun's disc appeared above the mountains and the chirrup of birds sounded.

"Poor deffils," murmured Prof. Pfeffler, "dey escaped yesterday only to be killed today."

By 7:30 the sunlight had become quite bright but as yet there was no sign from the ochre covering of the earth. Evidently the heat was not yet great enough. Dr. Spencerman went upstairs for his camera, while Dr. Riis and Prof. Pfeffler waited by the bay window where they could see the first sign of the awakening. At a quarter to eight Dr. Spencerman had his camera ready at the window to record the scene as they should see it. But still the heat was not sufficient.

"It must be frosty," observed Dr. Spencerman. "Would that winter could return just for twenty-four hours!" But such a thing was beyond the realm of possibility.

They waited. The suspense was becoming unbearable. Then Dr. Pfeffler turned on the radio.

From it came not the voice of the announcer, but a terrible roaring like a gigantil hail storm. "It's the swarm," said Dr. Spencerman in a low voice. "In New York the sun has been up four hours now."

Suddenly the voice of the announcer came in: "The sound is deafening to the ear. The streets are black as far as I can see. The fire chief fears that some of the buildings may collapse with their weight." The three regarded each other awe-fully. "Buildings! To think that they would crush buildings!" breathed Dr. Riis. Then the announcer's voice began again.

"The people are still crying for Dr. Riis and Dr. Pfeffler, the two scientist-creators of the *Rex Orbis Terrarum* beetle and the culture. We have been unable to locate them by telegraph . . . . We will now hear our announcer, who is stationed on top of the Metropolis Tower describe what he can see of Manhattan as a whole."

Dr. Spencerman spoke: "Those radio announcers are certainly heroes. Here the world is coming to an end before them and still they talk as tho it were merely an inaugural parade." He looked out of the window; the view was still undisturbed. He continued: "It is so serene here . . . . it seems impossible that such things can happen."

The announcer's voice continued:

"We have just received word that communications have at last been made with Dr. Riis' city, and that our telegram of congratulations will be received by him soon. In the meantime: The police have completely given up all hope of controlling the crowds on Broadway; every street in the lower part of town is covered with people and the sound of their cheering is deafening, even here, a thousand feet up. The names of Riis and Pfeffler are being shouted by all."

The three at the radio looked at each other in amazement.

Dr. Riis had just gotten back his breath enough to speak when the roar of a motorcycle sounded outside. A messenger, radiant with smiles, knocked at the door. Like an automatum Dr. Riis opened the envelope.

P. Riss,
Congratulations. Bacteria successful. Plagues checked throughout the world. Between midnight and 1 A.M. all Rex Orbis Terrarum in the world died of bacterial disease after a long period of incubation. People wild for you. You have saved the day.

ADAMS,
Secretary of Agriculture.

Dr. Riis, Dr. Spencerman and Prof. Pfeffler looked at each other in silence. Finally the latter recovered his voice.

"Vell, Dr. Riis," said he, "now dot ve is done mit dose bugs uf yours, I tink dot ve had better get busy on der examination babers for dose dummkopfs tests."

THE END.

Lords of the Deep

By Henry F. Kirkham

Illustrated By Marchioni

How Three Americans Were Used as Pawns by a Civilization of Five Thousand Years Ago!

IT all started in a most casual way, as most adventures have a habit of doing. Incidentally, none of us had anticipated that a mere friendly discussion would ultimately result in an amazing voyage. Yet that was exactly what occurred, which only demonstrates the truth of the old adage which says, "Man proposes, but God disposes."

The strange workings of fate began with the attempt of Professor Silas Hopkins to convince John Wilson, and myself, of the truth of an ancient Phoenician legend. This legend was based on the theory that the daring seamen of Phoenicia had actually crossed the broad Pacific, centuries before the Christian Era, and had established colonies upon the mainland of America. He cited the wonderful pyramid, once existing on the island of Tahiti, and the still more wonderful stone images found on Easter Island, as tangible proof that the chain of islands dotting the South Pacific had served as stepping stones to the west-

At that close range, it was not a battle but a massacre!

ern hemisphere. In fact, he argued that there was ample reason to believe that a great continent had originally spanned the southern ocean similar to the one that is popularly supposed to have extended across the Atlantic.

John and I knew better than to take issue seriously with Silas on the question of ancient sciences, for we had formerly been his students and we knew that he was a reliable authority on matters of archaeology. Nevertheless, John could not resist the temptation to "devil" him a bit. Said John, "True, professor, but still I hold that these same stone images on Easter Island look more like the creation of drunken savages than the work of civilized men. Rather a reversal of the usual course of evolution, if it be a fact." To which I added for good measure, "There go our chances for a quiet game of cards. The professor would rather putter around with a lot of musty gods, than eat! I move that we all adjourn to the theater and see the latest thing in Follies."

Silas calmly ignored my suggestion. Indeed, Silas was as difficult to steer away from this favorite theme of his as a young dog chasing a rabbit. First he cited us a list of authorities a mile long to prove his main thesis, and then, as his trump card, he produced a rare, unpublished volume of that indefatigable Phoenician scribe, Philo of Byblus. Philo, as you know, spent most of his time collecting and recording the facts and legends of those ancient days. This

particular book of manuscripts the professor had acquired on one of his many tours along the trails of older civilization and naturally he valued it so highly that he rarely displayed it. On this occasion, however, he happened in his eagerness, to drop the heavy volume sharply to the floor. Then an extraordinary thing happened. The binding of the covers flew apart, revealing a hidden receptacle containing some very time-worn manuscripts.

No one was more surprised at this discovery than Silas, for although he had possessed the book for many years, he had never suspected the tricky nature of the cover. You can deduce that we completely forgot the discussion as we watched the professor gingerly extract the hidden manuscript and carefully spread it out on the library table. Here was a find indeed, and must be of supreme importance judging from the trouble the author had taken to hide it! In addition to the written pages, there was a very ancient chart of the South Pacific, plainly traced to show a journey, beginning at a point near the Indian Ocean, and ending at a spot we had no trouble in identifying as that same Easter Island we had just been talking about. Strange! It appeared that the heathen gods I had scoffed at but a moment before were bent on utterly confounding my levity.

Nor was there any further thought of the Follies. Indeed, we spent the greater part of the night around the table, while Professor Hopkins translated the amazing record the hidden manuscript contained. Unfortunately, there were several pages missing so that we could not obtain a complete account of the queer story Philo had set forth. Enough was revealed, however, to involve us unanimously in an adventure of which we had never dreamed a few short hours before.

I do not intend to tire my readers with a lengthy account of the details contained in the manuscripts. Let it suffice to say that it was a very complete account of the wanderings of a daring band of Phoenician sea-rovers, recounted by a descendant of the original adventurers, who had returned to the land of his forefathers. This returned Phoenician related that he was a member of a race which for centuries had existed in a vast subterranean cavern. Once, indeed, the race had lived upon a great island continent, but a series of earth convulsions had submerged almost all of the original territory, destroying all but a few thousand of the early inhabitants. The survivors, however, had found life possible within the depths (here the details were lacking) and had set up a form of government after the customs of the ancient Phoenicians. Once there was an exit to the surface of the remaining island, but this opening had been sealed by command of the rulers, so that most of the inhabitants did not even know that it existed.

It seems, that the author of the tale, one of the returned Phoenicians, having offended the gods of the land, was condemned to die on the altar of the angry deities.

No more intriguing mystery exists today than that represented by the stone images of Easter Island. These stone statues, from 4 to 37 feet high, in this little South Pacific island, seem to point to the existence of an ancient civilization in a region inhabited only by primitive tribes. Even the relics of Inca and Aztec civilizations are more explainable than are the Easter Island mementos. Was it possible that a high civilization flourished on Easter Island in the remote ages of antiquity? Or did some civilized race such as the Phoenicians emigrate to Easter Island and before perishing there build these marks of their presence? Or perhaps, as a third alternative, does the race still live? Mr. Kirkham in this exciting story gives us the thrill of a contact of modern man with an ancient race.

But a young maiden, in love with the youth, had managed to obtain the key to the secret exit, and a chart of the route back to the land of Phoenicia. The rest of the story dealt with the escape of this romantic pair and the terrible hardships they endured before they came safely to the place of their forefathers. But what intrigued us more than the adventures of the lovers, was the chart on which they had faithfully traced the exact spot containing the secret passage to the underground cavern.

Did this cavern still exist? If so, what a thrilling possibility of archaeological adventure and treasure of antiquity the manuscript suggested. Truly no such find had been uncovered for ages even if nothing but the bare ruins remained. And what if human life still existed there—but we dared not dwell on so fantastic a dream as that. For a time we sat in silence brooding on the possibilities and the sheer romance of it. Then with one voice, we exclaimed, "Let's go!"

HENRY F. KIRKHAM

An Amazing Tale

SO it happened that a mere accident caused the three of us to embark upon the most adventurous quest that ever engaged the attention of mankind. I enjoyed the prospects of it immensely, aside from the scientific problem involved. A recent unfortunate love affair, together with a still more recent inheritance of a large sum of money, had somewhat soured my life of late, so that I welcomed this unique opportunity to escape the round of social pleasure that had begun to pall upon my youthful spirit. Of course I took it upon myself to finance the expedition on a lavish scale, for we expected, in the event that the main object proved an illusion, to spend some months exploring the wonders of the other islands of the South Pacific.

To that end, I chartered a staunch seagoing yacht named the *Navigator*. This vessel was manned by a crew of twenty, and stocked with every device that we thought would prove useful on our quest. Two months later we found ourselves on the deep, blue ocean bound for the mysterious island, first sighted by a Dutch sea captain on an Easter day. Since the island lay about two thousand miles off the coast of Chile, to which government it belonged, we had first to gain the consent of the Chilian authorities, before we completed the voyage to our destination. We knew, of course, that Easter Island was then leased to a live-stock company for grazing purposes, and was inhabited by a few natives once given to the practice of cannibalism, but converted into Christianity years before.

We had timed our arrival for the middle of March, which, in that sub-tropic latitude, would be the most favorable season.

All went well, so that we sighted Easter Island on a misty morning according to schedule. Viewed from a short distance, the island, only thirteen miles long and seven miles wide, appeared a small place indeed in which to find a hidden cavern. Our spirits sank as we contemplated the chances. It did truly seem a wild goose chase, but we decided to give the island the "once over" and to take a look at the gigantic statues for which it was famous. Accordingly, we dropped anchor at Cook's Bay and went immediately ashore to present our compliments to the live-stock manager of the island. The whole native population of the land assembled to greet us, clothed in nondescript European garments.

Easter Island is of volcanic origin, several inactive craters still extant, for the most part filled with small lakes. From one of these craters the weird stone images were originally hewn. Amazing they were, too, often sixty feet in length, weighing fully forty tons, carved from a single piece of stone into immense, grotesque figures after the likeness of a human being. Many of

the images were erected on great stone platforms along the sea-margin, while others were scattered in groups and in isolated spots all over the island. The early navigators had found them upright, but we found them cast down, like a row of ten-pins. It was certainly a mystery how they came to be on this dot in the Pacific, for together with semi-pyramids, circular towers, cisterns, and obsidian spear-heads, they constitute a remarkable collection of prehistoric relics.

But aside from the antiquarian interest, we had a much greater curiosity to satisfy. Therefore, after a few days spent in general investigation, we proceeded to the base of the largest volcano, marked on our chart as the entrance of the cavern we had come to seek. It was designated by the name Rano Raraku, which surprisingly was also the native name for it. According to the chart we should have found an image carved with a certain Phoenician symbol. This image might be moved by a clever arrangement of levers to expose the passage that led to the lower cavern. But alas! no such image could be found at the exact place designated on the map.

Professor Hopkins scratched his head in a puzzled and disconsolate manner. "Goodbye, dream," he exclaimed. "It looks like we were sold a gold-brick by our old friend, Philo! Well, anyway, we have had a lot of fun dreaming."

But John would not give up the hunt so easily. "Let's do a bit of digging. Perhaps the image has been removed since those old days," said he. "We'll establish a camp hereabouts and call on some of the crew for help." So it was agreed and we spent many fruitless days excavating tons of earth in a vain endeavor to locate that elusive image. We jollied John a lot for the zeal with which he labored, comparing his fate to that of Job.

But it was John who finally solved the problem. In the intervals between his arduous physical toil at the excavations, he found some time to rummage about the island, picking up a bit of local lore among the natives.

ONE day he ran across a very aged specimen of the tribe, who under the cover of secrecy, recounted a piece of island mythology that instantly intrigued the imagination of John. It had to do with the history of strange gods who occasionally appeared to his forefathers out of the bowels of the earth and gave laws to the people. To prove this story, the native produced a wooden tablet, incised with queer ideographic script, from which he read, or rather recited, more of the details. It seems that the gods came forth from beneath one of the giant images located at the foot of the volcanoes (at that period mildly active) but had finally ceased to appear. Before leaving, however, they had commanded that the name of the crater containing the image, should be changed from Rano Raraku to Rano Kao, thus confounding the possibility of any future knowledge or search for the hidden cavern. The native further added that the gods had placed a curse on anyone who should reveal the story, but, as he was now a good Christian, he no longer feared their wrath.

In a flash John saw the explanation for our failure. We had been wasting our time before the wrong crater. Needless to relate, he lost no time in getting to us with the information, and we in turn lost no time in shifting the scene of our investigation. But when we arrived at the new location, having used the diminutive steeds that furnished the only means of transportation on the island, we were again doomed to bitter disappointment. Some images we passed on the way, but at the spot marked on the chart, there was not the sign of one. There was nothing to do but begin the back-breaking excavating all over again, or else simply to abandon the whole enterprise.

Again it fell to John to achieve tangible results—John always was a lucky chap—for it was he who eventually uncovered the top of an *ahu*, or burial platform, that formed the base for the support of the statues. True, the image itself was not anywhere in evidence but, when we had uncovered the platform sufficiently, Professor Hopkins called our attention to the Phoenician symbol deeply engraven on one corner

of the structure. There was no doubt that we had hit, at last, on the portal of the mysterious cavern we had come so far to find. Also, this striking confirmation of the clue gave us good cause to expect the balance of the story to prove equally true. In our delight, we embraced each other enthusiastically, giving a very good imitation of an Indian war-dance, and winding up with three cheers and a tiger, to the immense astonishment of a number of lazy natives. They watched us dolefully from a safe distance, and prophesied dire disaster to our undertaking, savoring as it did to their untutored minds, of gross desecration.

Manifestly the next step was to unearth the actual passage. Inasmuch as the means for getting at the mechanism of the image had disappeared along with the statue, we finally decided to try the power of a few sticks of dynamite on the platform itself. But, as night was imminent with all its tropical suddenness, we decided to defer the experiment until the morrow. Meanwhile we retired to plan a course of action should the blast actually reveal the entrance we so ardently hoped to exist, for you must remember that up to date there was no certain proof that there were actually a passage and cavern. Tomorrow, however, we should know for a certainty! Perhaps, after all, we had been a bit premature with our celebration.

CHAPTER II

Beyond the Barrier

EARLY the following day we placed several charges of powder within some convenient chinks of the platform. Having connected these with an electric battery we prepared from a safe distance to test the truth of the story, once and for all. When the roar and dust of the explosion had subsided, and the natives on watch had likewise vanished, we hastened to the spot. At the bottom of the hole, a dark narrow entrance loomed. There could be no further doubt. We had found the way to the cavern described in that ancient script of Philo Byblius! All that was necessary was to clear away the opening and prepare to explore the hidden depths below. What treasures of antiquity might we hope to unearth? Surely no such treasure-trove had been discovered in the history of modern man!

It was determined that four of the seamen should accompany us and that a guard should be posted at the spot to keep away any curious natives, while the balance of the crew was to remain upon the ship. In case we should fail to return from the venture within a month, they were to organize a search party for our rescue. For the purposes of exploration, we selected a variety of equipment that we judged would be of value, including electric torches, a portable telephone, plenty of food and ammunition, and many other odds and ends. The arms might prove useful in case we chanced to encounter any remnants of that ancient race so dramatically set forth in the manuscript. Of course it seemed utterly impossible that they could have survived the countless years that had elapsed, but the rest of the story had been so strangely confirmed that we hesitated to question even so remote a possibility as this. In case our reception should prove inimical we wanted to be on the safe side, for we counted on the probability that the progress of a race of mankind so isolated from the world, could not have kept pace sufficiently enough to give them superiority in the matter of weapons, at least. Most of this equipment we proposed to transport on the back of one of our pack-horses, for an inspection of the size and inclination of the passage had convinced us that this was perfectly possible at the start, at least.

Thus prepared we gave one last look at the outer world, and then, Silas in the lead, we plunged into the dark passage before us. The air proved to be excellent, the path smooth, although deep in a fine dry dust, and the grade downward not excessive. The trail, however was circuitous in the extreme, so that we made but slow progress onward. Occasionally great rents showed on either side, but the main path was plain to be followed by reason of the mysterious Phoenician symbol blazed up-

on the wall at all confusing points. We had taken precaution to unroll a fine wire behind us in case we should become lost, so that we could, at least, retrace our steps. This wire also served as a means of keeping in touch with the seamen at the exit by means of our portable telephone. The passage altogether gave conclusive evidence that at some period it had been used by human beings, but not for a long, long time. Although we carried a compass, the continual winding of the path made us completely uncertain as to the distance we traveled or as to the direction. But we had traveled for the better part of an hour before we encountered anything of consequence. Then we came to a place where the path was absolutely blocked by a solid wall of stone reaching from the floor to the roof. Now here was an obstacle of no mean difficulty. If there was any mechanical method of opening it, we did not know, nor was our chart of any value in solving the question, for it made no mention of this barricade. Evidently it had been created later than the time of the returning Phoenician, and gave us the impression that it had been erected to forever seal the inner cavern from communication with the outer world. What might be behind that solid wall of masonry? Perhaps some vast mausoleum of the dead!

But, unless we were prepared to give up the quest, we must remove this barrier, massive as it was. Accordingly we again had recourse to the dynamite, trusting that the walls would not be as thick as they appeared. But to make matters safe we used a large amount, retiring to a long distance to fire and blast, the guide wire making this possible. So far did we retreat, in fact, that we could not see or scarcely hear the resulting explosion. Also we were forced to wait for a considerable time for the deadly fumes of the powder gas to disperse, anxious as we all were to push forward.

WHEN, however, we again returned to the place of the explosion, we met with the surprise of our lives. The barrier had been utterly demolished, it is true, but standing in the shattered opening, were a picturesque group of warriors clothed in the ancient garb of the Phoenicians. Under the light of flaring torches, they stood in martial array, while one of them, evidently the leader, surveyed the damage we had wrought in the barrier with critical, though somewhat dumbfounded air. Undoubtedly we had run across living representatives of the Phoenicians of long ago. Philo's manuscript had been confirmed to the last letter. The hidden cavern was not an empty tomb, but the abode of sentient life!

Naturally we took in these details at a glance. We had no time for further scrutiny before the natives also discovered us. To say that they were astonished would be putting the dramatic situation mildly. We had been expecting, or rather hoping, for some such meeting as this, but this company of men, long cut off from a knowledge of other life than their own, probably saw in us, creatures of supernatural aspect, either gods or demons. Indeed as we advanced towards them they appeared likely to flee in a panic, but whatever else the Phoenicians might have been, cowardice was not to be numbered among their shortcomings. Therefore at a sharp command of their officer, they reformed their broken lines, unslung the bows they carried, and seemed on the point of testing the question of our relation to the supernatural, at once. In addition to the bows they were armed with shields, spears, and short bronze swords, with some bronze armor on breast and legs. Somewhat above the average height, broad shouldered, and square set, they presented a decidedly warlike appearance. So much so, in truth, that we hastily put ourself in a state of defense, ready, should they begin an assault to open fire on them with our modern weapons. In that narrow space, the results of such a battle would be appalling.

But at the critical moment, Professor Silas, as the cooler and older head of our party, laid aside this weapon, and with empty and upraised hands, bravely advanced towards the Phoenician warriors, a signal of peace which is understood by even the most uncivilized tribes. Walking thus to within a few feet of the opposing warriors,

he spoke to them in the ancient tongue of the Phoenicians, a Semitic language of which he, as well as John and I, had a working knowledge.

"We greet you, oh people of this land! We come to you on a mission of peace. As envoys of a great country, we have journeyed from afar to visit your ancient race, we come in friendship, bearing suitable credentials, and we desire that we be brought before those in authority, that we may present them."

Apparently the officer in command understood this bold address, for he spoke to his company of soldiers who immediately reslung their bows, albeit somewhat reluctantly. Then, after some minutes of reflection, he addressed Silas briefly: "Come, I will lead you into the presence of my lord of Lemuria." And, forthwith he marshalled his soldiers about us in a manner that made us feel more like prisoners than envoys, and led us through the shattered barrier down the winding trail, once more.

Uttering no words, but eyeing us closely, we were marched along, under the flare of the burning torches. Needless to say we returned the scrutiny with interest. At nearer quarters, I noticed that these people of Lemuria were clothed in a sort of tunic reaching to the knees. The facial type showed heavy brows, broad noses, inclined to be hooked, and full lips, the complexions, however, being a ghastly white as though they had become utterly bleached out under an artificial light. In the main they resembled a strange blend of Mongolian and Semitic stocks, and the grim set of the lips gave them a rather cruel cast of countenance that did not bode well for our reception. I communicated my suspicions to John. John agreed with me completely. Said he, "These natives will bear watching. But it is up to you and me to do the watching. The Professor is so overwhelmed with the opportunities for study, that he will give scant thought of the dangers involved. Just look at him scribbling away at his notes! One would think that he was safe at home preparing for the next day's lecture."

An Ominous Outlook

PRESENTLY the trail began to widen. Also we saw that the darkness of the passage grew less dense. In fact on making a sudden turn, we came suddenly out on a high platform of stone that looked down on a vast cavern, extending for miles away. Along the top margins of this mighty grotto streamed a lurid glow, sufficient to illuminate the ground below in a glare of incandescent light. By this uncanny light we plainly saw a shimmering lake surrounded by a number of houses, while nearer stood a respectable city dominated by a huge citadel of stone. We gasped in amazement as we scanned this wonderful landscape spread before us. In our wildest dreams we had not dared to imagine so stupendous an outcome of our adventure. Talk about the 'Lost World' of fiction writers! Here was a piece of reality beyond compare, and we had to literally pinch ourselves to be convinced that we were truly awake.

Our leader of the warriors now unbended long enough to explain that the spot whereon we stood was a military outpost designed to guard the exit from the land. While the passage had not been used for years, custom required that it be guarded constantly. Especially now that rebellion raged within the nation, it was doubly protected. The muffled rumble of the explosion at the barrier had attracted his notice with the result that he had gone to investigate. How we had accomplished this display of power he was curious to know, but we thought that it would do no harm to leave him in a state of mystification. A little appearance of supernatural power would not come amiss in dealing with these rather primitive people.

Naturally we were anxious to begin the pilgrimage to the valley of this cavern. However, the leader apparently had something else in mind, for he detained us at the outpost, for several hours. We saw the motive of this delay when a very old man wearing the robes of the priest-clan put in his appearance. After some secret conversation with the leader, this priest, without

even greeting us, departed as silently as he had come. Soon thereafter, the leader conducted us down a steep flight of stairs leading down to the level of the valley. Of course we had to leave behind our faithful pack-horse, but we made shift to carry most of our baggage trusting only the odds and ends to the natives. But if we expected to make a sort of triumphal march into the city we were doomed to disappointment. Instead, we were led in a round-about way, entering the citadel from the rear, and seeing none of the city or its inhabitants. Finally we were lodged in a great stone room that had every appearance of a place of confinement, rather than the reception room of ambassadors. The whole situation surely bore an ominous outlook!

But whatever may have been the reasons for this duress, starvation was not included in the plans. Indeed, we had scarcely arrived before servants, much different in physical appearance than their masters, brought us in a generous repast. It consisted largely of some form of sea-foods, which caused us wonderment, inasmuch as the lake we had observed did not seem to be composed of salt water. Plenty of pure water and wine of an excellent variety completed the menu. I might add that most of our own equipment had been removed from our control, but we still retained our small arms. By that same token I was convinced that our hosts did not realize their importance. "So far, so good," I exclaimed after the meal. I confess I don't like our reception up to date, but anyway these birds have no intention of starving us to death, just now at any rate."

John laughed rather cynically. "Perhaps they are reserving us for a human sacrifice. The Phoenicians of old, you know, had some such pleasant custom. Or was it only beautiful damsels that were offered up for the burning? If so, that lets us out. But seriously I am not exactly enthusiastic about those armed guards at the door."

CHAPTER III

A Terrible Alternative

AS far as that went, neither did any of us. Yet, perhaps we had exaggerated matters unduly. The leader of the warriors had promised to conduct us before the Lord of the land, and the secrecy with which we had been conducted to the palace might only be the prelude to a royal reception later. That some of these people knew of other civilizations than their own, was proved by the tale of the escaped Phoenician, as, also, the folk-lore of the natives on Easter Island, even if the majority of them were held in ignorance. Whatever might be the reason for our present isolation, however, we could do nothing about it, and so we composed ourselves to get whatever sleep we could obtain in a land where it was never night in the common meaning of the term.

On the morrow we awoke greatly refreshed. After breakfast we were led into a council chamber containing only a few men and these all of the priestly order. Here we were subjected to a thorough examination. Our history was gone into in a manner that left nothing to the imagination. So minute was the investigation that Silas was inclined to grow angry and stand on the dignity of his profession. John and I could scarcely refrain from merriment as we watched the professor squirming under the personal questions that were asked him. He looked so much like a bug under a microscope. When the inquisition was over, the priests knew all about the reasons of our journey and the method of our arrival. Whether they had any clear conception of the advance of modern life, however, I rather doubted. They had been too long completely out of touch with all life on the surface. When the investigation was finished we were escorted into an anteroom while the court held a sort of executive session.

But when we were returned into the council chamber we were told in concise language the fate in store for us. Also we learned something of the present state of politics in the land. It appeared that a life and death struggle had matured between the priestly-clan and the legitimate ruler of the nation. This controversy had split the inhabitants into two factions, one led by the priests and a dummy king they had set up, and the other by the ancient line of kings.

The usurper, named Misor, the Redeemer, controlled the capital city and the majority of the inhabitants, while the true king had fled to a remote part of the cavern with a small quantity of loyal followers. This king was called Sydyk, meaning The Just. It further appeared that Sydyk had incurred the enmity of the priests by reason of his determination to resume intercourse with the outer world. This attitude the priests absolutely opposed as likely to bring about their own downfall, and the overthrow of the privileged caste. The deposed ruler had entrenched himself in a small city at the lower end of the cavern and up to date had held his own against all efforts of a much superior force to dislodge him. Now the priests conceived the brilliant idea of introducing us as avenging gods come to destroy the impious revolters. That is why we had been held in seclusion. The plan called for broadcasting the news of our advent to the enemy and at a fitting moment show us to the people with appropriate ceremonies. We were calmly offered the alternate of agreement to the plan, or death! A truly delightful prospect for peaceful visitors, now wasn't it?

Even Professor Hopkins looked gloomy as we digested the program on our return to our former quarters. But there was one ray of sunshine in the gloom, we had at least been granted time for reflection. The conclave had even promised to furnish us with suitable instructors in the political situation of the times. Of course, armed as we were, seven of us could give a good account, if worse came to worse. We even discussed the possibility of fighting our way back to the place of exit, but saner consideration only showed us the futility of such a course. With hundreds of grim warriors, and the solid walls of our prison, between us and escape, we knew that our superior weapons would prove of small avail. There was nothing that we could do but fall in with the plans until such a time as we could discover a better opportunity. Even our friends on the outside would be powerless to rescue us. It would require an army to penetrate this massive stronghold.

THAT afternoon there came our instructor. He was rather a jolly old codger for a Phoenician, and made us laugh on numerous occasions as he narrated the many tricks by which the priest-clan maintained their hold on the veneration of the people. Evidently he recognized that dissimulation would be out of place with us. The land they called Lemuria, after the original continent of which it formed a part. To the delight of the professor, he promised to produce certain manuscripts dealing with the history of vanished races that once inhabited it. But just now he was more interested in the civil discord that rent the land asunder. He denounced the attitude of the Lord of the insurgents. This ruler had sought to reduce the ancient privileges of the priests of Baal, and had even threatened to open the land to the outer world again, unless they consented to his plans.

But the priests were still powerful, sheltered as they were in the protection of the gods, and they had driven the ambitious monarch from the throne. Now, by using us as messengers of those gods, they believed that they could so play on even those followers of the king who remained loyal, that they would desert his standard, thus bringing their former ruler to his end. He admitted, however, that Sydyk, the Just, was a very clever man, versed in all the secret lore of the land, and a difficult problem to deal with successfully. As the successor of a long line of rulers, Sydyk was even posted on some matters not known by the wisest priest among themselves. That is why he greatly feared that the former ruler might devise some piece of stratagem that would be hard to cope with unless they acted promptly.

However, as a few days would be required to properly prepare the grand religious tableau for the undoing of Sydyk, the priest suggested that it might be possible to arrange a tour of the land for us. Suitably disguised he was of the opinion that we might proceed without discovery, "especially as he would be along to see that we did not stray too far away from the protection of the priests." He winked merrily at John as he made the later declaration. Natural-

ly we welcomed any change from the terrible monotony of our present close confinement. Especially did the proposal appeal to the professor who saw a rare opportunity to delve into matters of an antiquarian nature.

That afternoon (I was only able to tell the time of day by consulting my watch) the jolly priest, whose name he informed us was Beth-Ammon (rather Egyptian I thought) joined us, together with our grim captain of the barrier and several of his soldiers. By the judicious use of Phoenician garment and pigments, they speedily transformed the three of us into very credible natives of the land. Thus equipped we sallied forth, leaving behind the four seamen, albeit with reductance. As we passed through the massive gates of the stronghold and the numerous armed guards about the portals, we saw the folly of our previous idea of escape. Even with our dynamite we could not have forced some of the giant doors of this principal fortress. But, under the escort of our companions, we were passed without delay.

When we had come forth into the streets of the city, we saw, at a glance, that it was of considerable size and importance. The smaller houses were composed altogether of stone. The reason for this lay in the fact that, while much rank vegetation of a low order grew in the cavern, none of the hardy variety could flourish beneath the artificial light, lacking the vital rays of sun-light. So contrary to the usual Phoenician habit of building, they were compelled in this underground retreat to use the only material available. But anyway the number of dwellings indicated a population of many thousands. However the streets appeared more or less deserted, especially of the masculine sex. Beth-Ammon accounted for this by the fact that they had been drained from the city as soldiers to besiege the King in the lower valley.

The women, we saw were of the same general type as the men, but I thought somewhat more beautiful. The same division of classes, however, prevailed, so that some of the inhabitants more nearly resembled the original inhabitants of the old continent of Lemuria, while others bore a striking resemblance to the pure Phoenician race of invaders. Intermarriage had smoothed most of the points of difference, however. All types bore that strange bleached appearance, which was also characteristic of the vegetable life. What might be the source of the strange illumination we were at loss to conjecture. Yet light there was in plenty, and a warm, moist air also.

An Excursion

PRESENTLY we came to an elaborate *cippus*, or temple, of the usual conical form with the altars in front. The early Phoenicians built no covered temple to their gods as did the Hebrews or Egyptians. The tombs, though, were massive in the extreme and often ornamented in the most wonderful way. But Beth-Ammon evidently did not intend to exhibit to us these treasures of the dead on this excursion. Instead he hurried us down to the margin of the lake. It was fresh water as we had previously surmised, and contained some queer variety of fish, but we still wondered how the natives managed to obtain the sea-food that had constituted our principal articles of diet heretofore. It was apparent that they had devised some means of reaching the ocean, yet, how this was possible without a deluge we were still in the dark.

We strolled for a time amidst the numerous villages that lined the shore of the lake. Here again I noticed that the women overwhelmingly outnumbered the men. Beth-Ammon informed us that this was a regular condition. For some obscure reason the female births always greatly exceeded the males, which naturally led to the practice of polygamy. Perhaps the salubrious nature of the cavern and the easy mode of life, had something to do with the facts. Professor Hopkins declared that my theory was founded on sound scientific conclusions. Because of this polygamous relations the females were rated at a low standard, which was another proof of the Oriental lineage of the inhabitants.

From the lake we returned our steps back to the city. Here we were conducted into

a sort of Lemurian museum of science and arts. The historical value of the exhibits contained therein, was worth a king's ransom. Silver and gold ornaments, exquisitely carved vessels of various kinds and descriptions, jewel-encrusted weapons and shields, robes of the most amazing workmanship and coloring, formed but a small portion of these treasures of this wonderful place. In addition to the mere physical collection of antiques, Beth-Ammon produced an extensive array of ancient manuscripts, some of them going back to the time before Europe was born as a separate continent. In truth we had run across the true record of the great continent that once spanned the mighty Pacific, long before the dawn of modern history. Even I was dumbfounded at the magnitude of this find, while John and Silas were so entranced as to scarcely breathe. I knew that the professor would have been willing to sell his soul to the devil, for the chance of getting even a tithe of this collection back safely to civilization.

In the limited time we were permitted to examine the treasures, however, we could obtain only scant outline of the history of these ancient people. But a brief story was told us by Beth-Ammon, supplemented by occasional supporting documents.

Once, it seems, the present small fragment of Easter Island was part of a land area extending almost to the coast of Asia. In the beginning, that vast expanse of land was occupied by a race of men high in the scale of human achievement. Eventually they reached the peak of their racial progress that culminated in a magnificence beyond description. Then began the rapid disintegration which seems to be the fate of all nations when they have attained the pinnacle of their glory. Eventually they fell into decay and became the easy prey of another race, barbaric but robust. It was this later race, men of gigantic stature, who had erected the wonderful images we had seen on Easter Island. In turn these mighty men had perished, mostly by reason of the subsidence of the major part of the continent. The balance had fallen before the invasion of still another race of natives from the mainland of Asia. Then it was that the Phoenician voyagers had arrived at the island, still of considerable size. These early seamen had found the place so pleasant that they had settled there, conquered the remaining inhabitants, and set up a government after the fashion of their parent land in the far west.

CHAPTER IV

A Terrible Danger

THIS then was the story of the great continent of Lemuria, of which nothing now existed excepting the group of Pacific islands. It was also the explanation of those giant images of stone that had so puzzled modern minds. Now, Beth-Ammon came to the story of the great cavern. He told us that the first Phoenician settlers had lived on the new land for many generations, intermarrying with the natives, until the final catastrophe. Came a day, however, when the volcanoes spouted fire and the island rocked beneath the force of tremendous ocean convulsions. Then it was that a few hundred of them had sought refuge in the great natural cavern of whose existence they were aware for centuries. Strange to relate, this cavern had resisted the onslaught of the destruction that had made life impossible upon the surface. So secure had they found the refuge, indeed, that they had made it a place of permanent habitation. There, in the course of time their numbers had increased to many thousands, and they had decided to seal themselves off from the outer world, lest other tribes of men come upon them and bring them in turn into subjection.

But it also seemed that the present lord of the land had advanced views. While he knew of the outer world, as did the priest-clan, most of the present generation had forgotten, if they ever knew, of the existence of a world apart from their own. But Sydyk argued that sooner or later utter destruction would overwhelm the little refuge they now occupied, and it was better for a thousand reasons to break the seal of isolation and migrate to a more secure abode. This attitude of Sydyk's, however, the

priests bitterly opposed. They seemed to have made a pretty shrewd guess as to the state of development in the outer world and saw that such intercourse with alien races plainly spelled the end of their centuries of civil and religious hold upon the people. Consequently, relying upon their power as servants of the gods, they had deposed the king and set up a noble in his place, one, moreover who could be bent to their desires. It was this plan of the priests to which we owed our lives up to date, as they evidently intended to utilize us in some fantastic appeal to the superstitions of the masses. However, it needed no conference with my companions to convince me that our interest lay with the former Lord, if by any means, we could come within his protection.

After this lecture on the life and history of Lemuria, Beth-Ammon escorted us back to our quarters in the fortress, although it required almost a display of force to tear Silas from the museum. I verily believe that he would have been content to have spent the balance of his life therein, for such a storehouse of prehistoric relics no modern man had ever seen. Nor, alas, ever will again!

John and I were rather afraid that this stubbornness on the part of the professor might result in our being kept confined altogether within our prison, but the following day, Beth-Ammon showed up and pleasantly invited us to another tour of the land. On this occasion he caused us to be rowed across the lake, hence by a winding trail to a huge portal of stone located nearly to the top of the cavern. By some secret mechanism he opened a small door through the portal and led us out onto a great natural shelf of rock. From this elevation we were able to look down into a glowing pit of seething lava, from which arose a dense cloud of sulphurous fumes. These fumes, we were informed, did not invade the cavern proper, but, were fed into a channel leading beneath the sea. The intense, fiery, glow of the central pit, however, reflecting against the roof of the cavern, furnished the light and heat that made possible the life of the place. Also a down draft of air, resulting from the heat of the pit, supplied the necessary oxygen to support active existence. Here, then, was the true explanation for the weird illumination we had wondered at. We could not repress a shudder as we peered cautiously into the glaring depths of the inferno. What if this molten mass should overflow its confines, and pour down on the helpless inhabitants below? Indeed, Beth-Ammon told us that this very thing had once occurred, but in a limited way, so that, while the loss of life had been severe, it had not been beyond repair.

Still to prevent any human agency from producing a similar catastrophe, as they might easily do in some fit of desperation, the portal was strongly watched. He likewise informed us that another such lava chimney arose in the lower valley. Although the entire cavern was of great extent, only those two spots were suitable for human existence. It was this lower valley where the former Lord was now entrenched, and he had even threatened, if in danger of capture, to release the boiling torrent of that place, and thus bring about the total annihilation of friend and foe. Therefore the priest-clan had felt the need of proceeding with extreme caution in bringing about his demise. It would be a hollow victory, indeed, that resulted in the absolute destruction of all concerned, perhaps of the very island, itself. Needless to say, we three agreed perfectly with this wise conclusion of our jolly priest.

FROM the place of fire, we journeyed towards the lower valley. When we came near to that spot we clearly noted that the cavern was almost divided by a narrow pass. Here the former Lord had erected a barricade, behind which he conducted so gallant a defense that the besiegers had not made much headway, although they outnumbered him four to one. While we did not come close enough to this barricade to see the conflict in detail, by means of a pair of field glasses we plainly saw the king, himself, upon the ramparts, and a noble figure of a king he made. These glasses, by the way, were something of a novelty to Beth-Ammon, although not especially a surprise

to him, for you must remember that the natives of the cavern came from a very inventive race. True they had made but slow progress, cooped up as they were. Raw material was scarce and new infusions of blood, unknown. But in spite of this handicap they had done some remarkable work, especially along the line of building and engineering. One such work of note we now had the opportunity of inspecting. High up against the ceiling of the cavern, Beth-Ammon led us to a great stone portal similar to the first. Again he opened a small door and showed us a unique cave several acres in extent. The bottom of this cave was filled with a deep pool of ocean water. Nothing but a glance was needed to assure us that there was the fishing grounds of the inhabitants. Our guide explained that this pool was occasionally stocked by the simple expedient of raising a gate set in the sea wall and allowing the denizens of the ocean to enter the cave, after which, the gate was lowered and the cave drained of its surplus water by a clever arrangement of pumps. The ensnarement of such sea life and vegetation as came into the trap was an easy matter after that, and could be pursued at leisure. John, who is a rather lazy fisherman, was delighted with the contrivance, and declared that he would go about constructing a similar device, adding "if ever we came out alive from this jumble we are now in."

It appears, according to Beth-Ammon, that the ocean side of the pool was only about thirty fathoms beneath the surface. Professor Hopkins instantly made a note of this information, suggesting to us, later, that here was a possible avenue of escape. "All we needed was a suitable submarine." This remark of the professor's caused John and I to laugh uproariously. "How about an airplane?" countered John. "Or better still one of those amazing inventions of the fiction-writers, such as a Time-Machine or an invisible ray?" But experience proved, after all, that Silas was wiser than we sometimes believed.

The day following our excursion to the pool, was fixed for the grand tableau in which we were to play the leading roles. To Silas, as the most dignified of the trio, was assigned the part of the great god, Baal; John drew Dagon, the fish-god; while to my mortification as the youthful member, I was decked out to represent a female goddess Ashtoreth, a sort of version of Venus. All of the robes were magnificent, not to say authentic. Indeed, they were the actual garments used by the ancient Phoenicians in their worship of the gods. Silas did appear very impressive in his attire of priceless cloth and jewels. But John squirmed grotesquely in a tight fitting suit of green fish scales, and my own beautiful drapery so arranged as to give the illusion of female charms, was so ridiculous that we could not repress our merriment in spite of the gravity of the situation. To tell the truth, we all, including our loyal seamen, fully expected to end the ceremony upon the burning altar of the cruel gods we were supposed to typify. Three of the seamen were decked out to play the parts of Titans, or giants. One of them we insisted should be left behind to watch over such property as we still had in our possession. We also kept our side arms, which for some reason the priests did not seem to realize as significant.

Denounced!

THUS arrayed we were led in solemn state into the great throne room of the fortress. Here we perceived the puppet king seated on a wonderful carved chair surrounded by his principal nobles, while as many of the chief commoners crowded in the hall as the space would permit. Around this hall we marched several times to the music of loud trumpets and the clash of cymbals. As we passed the station of the king all the assembly prostrated themselves before us. Finally we halted under a splendid canopy of priceless cloth, where the three of us impersonating the chief divinities, took seats upon raised platforms ornamented in the most weird manner.

Then began a series of religious ceremonies that included various dances and other devotions too involved for me to remember. Professor Hopkins, no doubt, has them at

his finger-ends, and will enlighten the readers who care for details in a book he expects to write later. As for me, I was more interested in the vivid stage settings than in the exact technic of the proceedings. I do know that the high-priest, after the finish of the main program, made an eloquent speech in which he rebuked the sacrilegious attitude of king Sydyk, pointing to us as messengers of the gods returned in person, to avenge the wrongs of the nation. He made it pretty clear, moreover, that unless the former king, and his deceived followers, rendered prompt submission to the authority of the priests, a dreadful calamity would be visited upon the entire kingdom. All in all, the high-priest made out a strong case for the plaintiffs and it sure looked bad for the defendants, provided they had been present to hear the testimony. It seems, as gods, we were not supposed to take an active part in the debate, as it were, mere exhibits in the pleadings.

However, as the defendants were not present in the court, nor likely to answer a summons, personally, it became necessary to adjourn to high court to a spot nearer to their place of abode. Accordingly, headed by the dummy king, and the balance of the army not already engaged before the enemy, we all set forth in full pomp towards the lower valley, we, as gods, being carried on the shoulders of husky retainers. I could have laughed at the fantastic procession, particularly as I noticed John still squirming in the tight suit of Dagon, the fish. But there was too strong an undercurrent of emotions in the fanatical horde of shouting natives to venture on a display of levity. Indeed, as we proceeded we all became infected by the excitement of the moment.

After an hour's march it became necessary to light flaring torches, for we had entered the narrow pass, not illuminated by the lava glow. Under this flickering glare we presented, if possible, a more weird spectacle than before. But when we had arrived at the barrier, the light of the lower valley furnished sufficient light to see clearly. We naturally halted an arrow's flight distant from the stone defences, for even the inflamed marchers had too much respect for the doughty warrior, Sydyk, to risk their lives unnecessarily. A pile of dead before the barrier also bore eloquent testimony of the fierceness of the assault, up to date. Here was evidently no laughing matter, but bloody warfare in its grim reality!

The conflict, which had been going on in a rather listless manner previous to our arrival, abruptly ceased when we came into view. There was no question that the defenders were astonished at the appearance of the ancient priests, dressed in full regalia and seeming to bring the living gods they all had worshiped for countless centuries. And when a herald of the priests had advanced within speaking distance, under cover of a flag of truce, and had loudly proclaimed the dire purpose of our coming, consternation was visible amongst them. Indeed for a few minutes it truly seemed that they intended to throw themselves down on the ground as a taken of submission to the will of the gods. Devoted as they were to the cause of their hereditary prince, generations of subservience to the power of the deities they venerated was even more potent to their loyalty to his cause. Were they but convinced that we were indeed the gods we claimed to be, nothing the king could do would prevent them deserting his standard. At this critical moment, however, Sydyk, himself, appeared upon the rampart of the barrier, crying out in a voice that could be distinctly heard to the farthest man:

"Shame on you for cowards and impostors! Listen to me, oh my people, I, your lawful lord, declare that this is but a trick of the crafty priests. These gods are no true gods at all!' They are but men from the outer world, a world that I would open up to all of you so that you be not forever stifled in this narrow place of ours. I repeat, the priests deceive you. Lay hands upon these false gods and prove my words!"

AT these bold words of the king, the tide was turned against us, such is the power of words. Indeed the rabble about us eyed us with suspicion, while the king's party shouted at us in derision. Af-

fairs began to look mighty dark for us, especially, for it certainly appeared that we should share the usual fate of mere pawns in the game of war, and perish whichever side won. But the priests were not defeated yet. The high priest quickly rallied around us the soldiers, on whom he could depend, and shouting to the people that the king was a blasphemer and liar, ordered an immediate assault against the defenders, courageously leading the attack in person, holding on high some sacred relic of worship.

CHAPTER V

Into the Fire!

IN the confusion that ensued, other of the priests sought to withdraw from the vicinity, carrying us away in their midst. Before this maneuver could be successfully accomplished, however, a body of the king's soldiers issued from a hidden passage at our very side, slew the priests about us, and as swiftly withdrew again, taking us with them. So quickly was the trick done that the mass of the besiegers did not even miss us before we had vanished from view. Nor did we, ourselves, have time for full realization of the effects of the sudden sortie until we found ourselves securely bound in the dungeons of King Sydyk. It was certainly an ignominious downfall; one minute worshipped as gods, and the next minute, cast into durance vile! But, of course we rather welcomed the transfer. We know that the priest-clan were only using us to pull the chestnuts out of the fire, after which, we would probably be roasted ourselves. So we made no effort at resistance, for as we understood the civil war, Sydyk was committed to a policy that fell in with our own views of ultimate liberty.

However, as the hours rolled along and we saw no one save a surly jailor who brought us our meals, we began to have grave doubts as to the wisdom of the change. Perhaps, after all, the King believed that we were parties to the priest's deception, and intended to make horrible examples of us. Our captor was better posted than the priests for he had stripped us of our side arms, leaving us helpless to even make a show of a fight. Indeed we were a gloomy looking lot of mortals as we reflected on the state of our fortunes.

"A fine kettle of fish," exclaimed John peevishly, "and I don't mean maybe!"

"Fish is correct," I rejoined looking at John's unique makeup. "Sort of out of the frying pan into the fire, I call it."

After this mild attempt at humor, in which nobody seemed to join, we all lapsed into silence again. Even Silas appeared immersed in gloom, which was somewhat of a change for him since we had penetrated this wonderland of ancient treasures.

But it is long lane that has no turning. One day we were summoned into the presence of the king, and a few of his trusted followers. Here we were put through a third degree that brought out the complete story of our life and times—something after the inquisition of the priests. King Sydyk was a fine figure of a man and we soon learned he was as wise as he was splendid in personal appearance. He did not seem to be as astonished at our story as one might have expected considering the circumstances. In fact he finally told us, when we had completed our history, that he had made a very searching investigation into ancient records, an investigation that had convinced him that there were other races of men extant upon the earth in addition to the present inhabitants of the vanished Lemuria, a story that had been circulated for ages throughout the land. But when he sought to put the real facts before the people, the priests had deposed him, and forced him, supported by a few of his faithful retainers, to fight for his very life. At present affairs were in a desperate condition, but nevertheless he frankly asked us to join him, promising, at least, to assist us to escape safely to the outer world.

To the King's proposal of alliance we naturally gave unqualified approval. Whereupon he restored our personal belongings, and removed our quarters to a comfortable room facing on an enclosed garden. He thought it better that we remain hidden for a time, even from his own people. But the king frequently visited us there to take council with us regarding the state of affairs. One day he even brought his favor-

ite wife, and what pleased me more than anything, his young and charming daughter. Needless to recount, I straightway fell, head and ears, in love with this fair maiden, a love that I am happy to announce, she fully reciprocated. So it came about that, while John and Silas gravely debated questions of war, I devoted my talent to the more important lists of love. I rathered fancied, considering the critical state of politics, my companions regarded my antics with disapproval, but as the sequel proved, this bit of romance was of greater value than all the grave deliberations of my elders.

OF course, John and Silas posted the King on the superior quality of modern weapons of warfare. Particularly the deadly nature of the dynamite, unfortunately now in the hands of the enemy, together with one of our seamen. It was imperative that we attempt a rescue of the seaman, at any rate. We could not, under any circumstances, abandon him to the tender mercy of the priests. We put this problem strongly before King Sydyk, and he promised to aid us as soon as he received the report from a certain spy he had in the camp of the dummy king.

A few days later he came again with several heavily armed warriors. He informed us that the seaman, and all of our equipment had been placed in a dungeon of the capital stronghold, a dungeon situated deep in the ground. This was the opportunity he had most desired, for he knew of a secret passage that led to the very spot, thus affording more chance of success than if we had been forced to invade a more populous portion of the fortress. Yet the mission was fraught with great danger, and he hesitated asking us to join the adventure. However, being young, John and I naturally scouted hazards, while the three seamen would have cheerfully given their own lives to help save one of their comrades. Hence we volunteered unanimously to join the expedition.

After dressing us in the prevailing attire of the other warriors, the King led us into a long winding passage cut out of the solid rock of the cavern. It seems that this ancient place was fairly honeycombed by such hidden ways, for what reason I was at loss to know. In fact King Sydyk himself, did not understand the original purpose of many of them. But he told me that he was better posted on the location than any other living inhabitant, even the priests; for a written key had been handed down from father to son, by the line of hereditary rulers since the very earliest days.

This passage led us securely to the rear of the besieging forces before the barrier; but when we had emerged into the open air of the upper valley we ran grave danger in chancing across patrols of the enemy's soldiers. In truth we did meet one such company, but the commander of it, being in a rather intoxicated state, we managed to convince him that we were likewise soldiers of the dummy king returning from the front, and so escaped without recognition. However the king remarked on the drunken celebration among his foes, noting sadly, that they had good reason for their rejoicing for daily his own followers fell away from his cause. We must need act swiftly if we hoped to escape with our skins.

Without further mishap we reached the rear of the stronghold. Here the king again found one of those multitude of secret passages and quickly led us downward until we arrived at a door which he assured us opened into a corridor before the dungeon. Now, however, we had come to the most dangerous part of our mission, for a small peephole in the door revealed that the corridor was guarded by a score of armed warriors. How many more might be near at hand we had no means of ascertaining. I must admit that I did not like the looks of my brawny foes, especially as it was decided that we were not to use our automatics, because of the noise they would produce in that narrow space. Therefore I gripped the sword that I carried and awaited nervously the signal for the attack!

The next few minutes were filled with enough excitement to last a lifetime. In spite of the surprise nature of our onslaught, our foemen quickly rallied and met our attack with equal fury. The struggle waged desperately as such hand to hand conflicts

always do. While the king's soldiers exchanged bloody blows with their antagonists, my companions and I attempted to gain the dungeon. But the door was heavily barred, and the equipment was hard to select from, so that we wasted precious moments struggling with the problem of getting it safely within the shelter of the secret passage. Also, I had to go to the assistance of John who found himself engaged in an unexpected affray with a guard hidden within the dungeon itself. Besides the light was poor, being furnished by a number of torches stuck in the walls of the corridor.

A State Council

TO make matters worse, the enemy were reinforced by other guards from a nearby guard-room. Indeed the king, who was performing prodigious feats of valor, found himself so surrounded by foes that he was utterly unable to retreat within the shelter when we, at last, had managed to convey the confined seaman, and some of our equipment therein. Already we had lost several of the king's warriors, while all of us were more or less injured by the combat. There was nothing else to be done, if we hoped to save the day, than to give these natives a taste of modern inventions. Therefore we whipped out our automatics and quickly opened a deadly fusillade of fire upon the enemy. The results were all that we could have asked for. In a wild panic the enemy fell back before the frightful carnage that ensued at this close range. Evidently they must have imagined that the very gods had taken a hand in the fray.

Under cover of the rout, we made our way, such as were alive, out of the stronghold of our foes. We all realized that it would be impossible to retrace our steps the same way we had arrived. To venture through the open country again would only result in our capture. As it was we must get out of sight speedily, for the enemy would soon be on our tracks.

One such hiding place was near at hand, no less than one of those massive tombs of the departed lords of the land. Into this place we quickly ran, but we knew that, at best, it would prove but a temporary shelter; the priest would ferret us out of that retreat in little time. However, the king seemed to recollect that another of those secret passages ran from this particular tomb. If only he could locate the key to it! Sure enough he found the passage without much loss of time. By means of hidden paths we hastened to put as much distance as we could between us and our revengeful foes. The passage, however, was long unused and had many divergent channels, so that we stumbled along until we were utterly exhausted. Eventually, we did manage to arrive safely at the king's fortress, more dead than alive, but happy in the success of the adventure. Naturally my fair Phoenician maid showed much concern over my wounds, although I was the least injured of any. I vowed that I would endure a thousand such perils for such a consolation.

But now that our party of explorers were united again, the problem of our escape was just as pressing as every. We had been provisioned for a month and as our friends on the outside would not expect us for that period of time, we could not expect any help from that source. True we now had in our possession a quantity of high explosives and a generous supply of small arms. But these would be insufficient to force our way through the tightening ranks of the hundreds of our besiegers, even with the king's support, a support that was steadily falling away from him. No, it was manifest that we must depend on our own ingenuity, or we would inevitably fall into the clutches of the priest-clan, with an outcome we shuddered to contemplate.

It was then that the king called a state conclave. Here we were presented formally to the assembled nobles and retainers of the King. To these bewildered natives we told the true story of the outer world, and the trick the priests had sought to impose upon them. There were loud murmurs, for the priest had caused to be circulated among them the tale that we had disappeared from their ranks, to return presently and destroy the followers of the king, unless they would give him up to judgment. But while our story proved the

rank hypocrisy of the crafty priests, it did not solve the problem of our safety. One of the nobles suggested that we show ourselves on the barrier and tell the same story to the enemy, but this plan was promptly vetoed as giving the priests the chance to charge us with faking and to probably renew the assault with renewed vigor, an assault we could ill withstand. So it was that a number of projects were rejected as impractical, leaving us finally in a state of gloomy depression.

It was friend Silas who first proposed anything of value. He suddenly exclaimed: "How far is it to the fishing pool? If we can get there without notice to the enemy, I believe that I can devise a means of escape through the exit, at least for one of us. If that one can reach the ship, it will be possible to arrange an escape for all of us!"

In a flash we knew that this was the only means that offered the slightest chance to save the situation. Even the king perceived the value of this suggestion providing Silas could make good with the device. He said, "That pool is only a few hundred yards from the lower valley, from the barrier end. But I know of a way of reaching it over a longer route. Moreover, the pool is deserted at this season of the year. Come, I will lead you to the pool at once!"

ONE inspection of the pool, reached from the inside by one of those queer passages, quickly convinced the party that the plan could be worked. When the sea-gate was raised, of course, the cave was completely filled with water. But we saw that by bringing a diving bell the ship possessed into use, and by alternatingly pumping out the water and letting it in again, we could eventually transport the few hundred followers of the king to the outer world. At any rate this plan, hazardous as it was, presented our only hope of salvation.

When we returned to the fortress, Silas set about constructing a rude diving suit. There was plenty of material available for the helmet and covering, but the problem of the oxygen supply was difficult to solve. But as I have stated, the Phoenicians were rather skilled in engineering, and they finally managed to convert one of their pumps into a suitable air compressor. With this rude contrivance Silas designed a rough sort of tank filled with sufficient air to last for a few hours underwater. Naturally as the youngest and the less burdened with family responsibilities, I was given the doubtful honor of trying out the professor's invention. Except for parting with my brave companions, I really believed that I had drawn the least dangerous assignment. For there was scant denial that those I left behind might fall at any time into the snares of the enemy and be offered up on the altars of the heathen gods before I could return again. The situation was truly desperate, however you looked at it!

When the rude diving suit was finished, we journeyed to the pool with a small escort of soldiers, which the king posted, at strategic points near the great cavern portal. This proved a wise precaution, for I had scarcely donned the diving suit, preliminary to a trial, when the portal flew open and who should saunter calmly in but my old friend Beth-Ammon. Luckily for us, the visit chanced to be only accidental, or we should have been in a tight box. When we had secured the jolly priest, he took the matter lightly, remarking that he would soon be free again. Indeed we knew that he spoke the truth, and the visit but emphasized the need of utmost haste, for if the enemy once suspected our plans they would immediately seize the pool and all our chance would go glimmering.

Therefore after a last long embrace of my beloved, I descended to the bottom of the pool, which at this point was only about ten feet deep. When, however, the king's party had left the cave, through the small door, and set in motion the mechanism which lifted the sea-gate, I experienced an extreme dizziness due to the great pressure of the ocean depths of which I had now become a part. For a moment I thought that the helmet was giving way to the pressure, but a moment later the dizziness ceased, and I had no trouble making my way to the end of the cave, using my electric torch to guide me. So easy had been the exit that I began to congratulate myself that all was over but the shouting. But my rejoicing was turned in an instant into utmost horror. Around one of my feet, was closed the slimy

tentacle of that terror of the deep, the giant octopus!

Then began a regular nightmare of a battle. I was armed with a keen, powerful knife, but slash as I would at the slimy coils they drew me slowly with irresistible force towards the horrid staring eyes, and parrot-like beak of the frightful creature. Once drawn into that sickening cavity that represented its mouth, I was doomed to a revolting death. Also if my arms became pinioned or my diving suit torn, I was as surely doomed. How long the struggle waged I never knew, for as I was almost at my last point of resistance, I made one slashing blow straight at the staring eyes, and then fainted!

The Last Stand

WHEN I recovered my senses, I lay in a native hut on Easter Island. According to the natives' story I had popped suddenly out of the ocean depths, right alongside of a boat in which they were fishing. At first they had rowed frantically away from the spot believing that an ocean devil had sprung into view. But calmer judgment prevailed and they had returned and pulled me out of the water. On reflection I concluded I must have slain the octopus by that last despairing blow of mine, and at the same time slipped the weights fastened to my feet, so that I came to the surface under the buoyancy of the air-tank. Never again will I be able to look upon an octopus without fear and hatred.

But I must not dwell long upon my own personal misfortunes. My own affairs was of little moment, while the lives of a score of my friends depended upon my speed. Therefore I made hast to get in touch with the *Navigator*, and without loss of time we ran the ship to the spot from whence I had arisen from the sea. We had no difficulty in locating the entrance to the pool by means of divers. Then we lowered the diving bell to the bottom, equipped with ten of the seamen spoiling for a fight, and plenty of weapons, including a couple of rapid-fire guns. This bell was a recent invention capable of remaining submerged for several days. It was also constructed with a tractor attached to the bottom, so that by a series of gears it could be propelled along the ocean floor. By detaching the cable that lowered it, we had no trouble in driving the bell into the cave up to the shallow margin. But, of course, the cave was now filled to the top with the ocean water.

Donning a diving suit, I made my way from the bell to the small gate, that was marked in such a way that I could readily discover it. All depended now on my signal taps against the closed door being answered. That would be the cue for closing the sea-gate and starting the pumps to drain off the surplus ocean water. Although we were literally knocking at the door to render help, we were impotent unless the door was raised. To batter in the door ourselves would only release a deluge of water upon friend and foe. But though I knocked insistenly upon the gate, no response came to my repeated raps. What on earth had happened to my friends?

I had almost resolved to leave the cave and seek to effect a rescue through the entrance of the image. Still I was fully aware that I could never overcome the enemy from that direction with the small force at my command, even if the priests had not utterly destroyed that passageway by this time. Anyway it would be too late to save my friends from death, provided I got in touch with the Chilean authorities and they sent an army to my assistance. But while I thus evolved and rejected a thousand mad schemes. I heard the welcome sound of the drainage pump at work. I could have shouted with joy so great was the relief!

When the water was finally lowered, so that the diving bell was almost uncovered the small gate was opened. Alas, it was a truly pathetic, and frightened figure that fell into my arms. My own Phoenician sweetheart with the most alarming news! The foemen had carried the fortress and the barricade, had slain most of the gallant defenders, including two of the seamen. The balance of the king's forces, a mere handful, had retreated across the lower valley and were now making a last stand at the very lip of the crater. Here they were fighting fiercely, the king vowing that he would use the remaining dynamite to re-

(*Concluded on Page* 606)

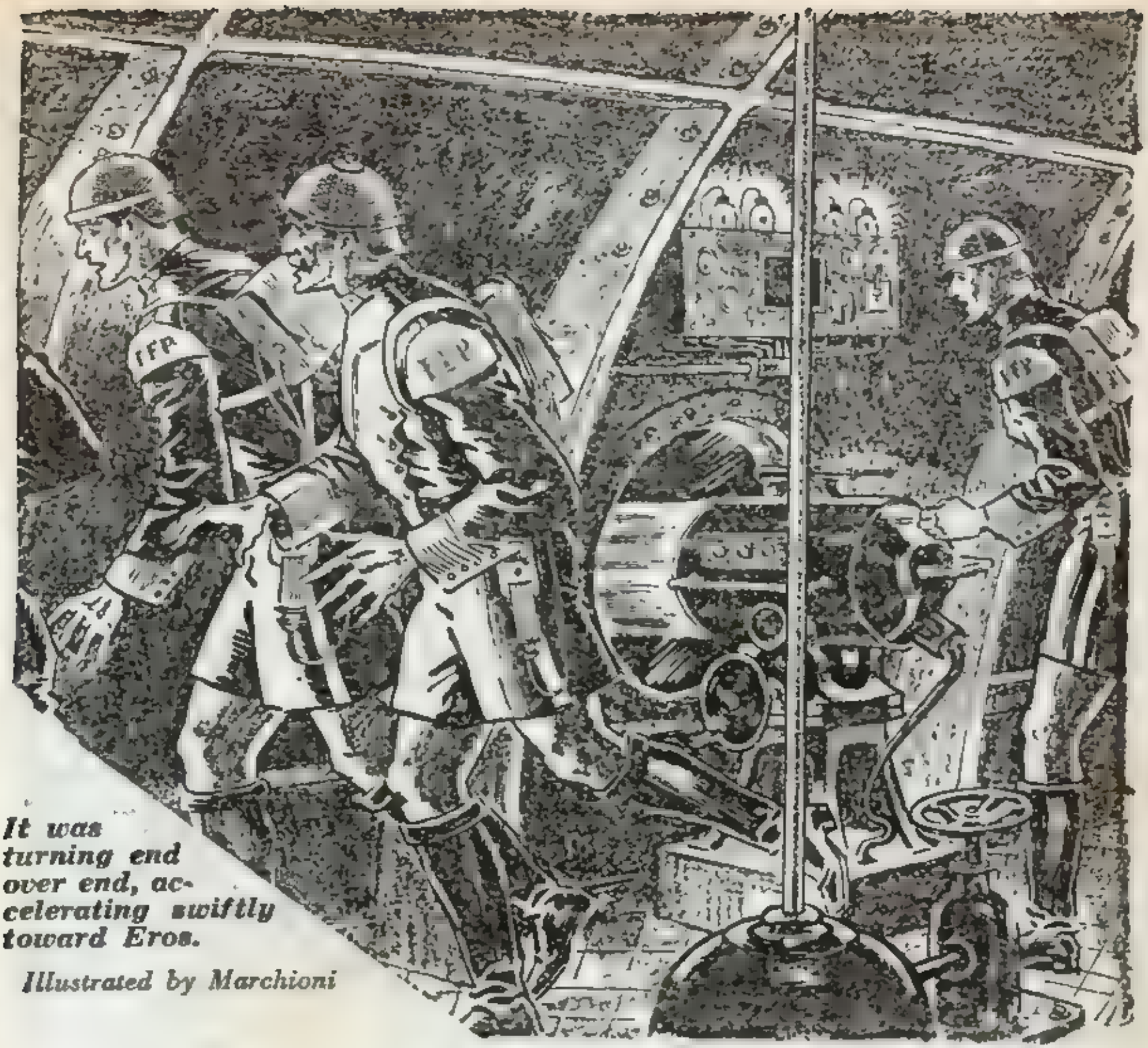
Hornets of Space

By R. F. Starzl

How the Interplanetary Police Overcame a Dreaded Raider of the Void

THE *Medusa* seemed motionless in space, not a tremor to indicate her swift transit to Uranus. The rockets had been practically cut off, and the great interplanetary liner drove through the void on her own momentum. In appearance she resembled a silvery, enormously magnified shell fired from a huge siege gun, but her passengers would not have understood this simile. Those ancient weapons had been superseded before the close of the Twentieth century, and this was the Twenty-third.

Within that colossal shell were nearly a thousand passengers, a crew of four hundred skymen, and near its base, handy to the exit chutes a troop of forty-two I. F. P.'s and their commander—the Interplanetary Flying Police who carried the law of the dominant human race to the outermost orbit of the solar system.



It was turning end over end, accelerating swiftly toward Eros.

Illustrated by Marchioni

The I. F. P.'s room followed the standard of other compartments in the *Medusa's* outer layer. It had a floor whose gentle curve followed the curvature of the shell, walls that slanted inward toward the center of the ship, making a wedge whose edge was cut off by the metal ceiling about twelve feet high. The rotation of the ship on its longitudinal axis (strangely reminiscent of those ancient fighting shells) served in lieu of gravity to hold objects to the floor.

Patrolman Hy Dinsmore crawled out of his fighting "Hornet"—an egg-shaped vessel just big enough to hold one man comfortably, which he had been tuning up, to hear the cry:

"Fight!"

It was music to his ears, as it was to the ears of every man there, for the voyage was already becoming tedious. From their hammocks, in every part of the spacious room, men swarmed to the center where, under a cluster of emanation light bulbs, two men were milling in combat. A ring quickly formed around them, and the men took sides, cheering for one or another of the gladiators.

"It's the rookie, Strickland. Go it, Larry!"

"Don't let the rook rook you, Neary!" another cheered. Neary had left the imprints of his knuckles on more than one member of the Police. He was the best bet, though he was not popular.

"Watch out for his left, Rookie!"

Bam! Neary's granite left, backed by

170 pounds of knotted muscle and bone, landed on Strickland's jaw. The rookie's head jerked, but he did not fall. He drew back a step, then recoiled. His own right, with a long, easy, deceptively swift motion, lashed out. Neary caught the blow on his forearm, and it jarred him to the heels. The rookie, counting on that momentary unbalance, stepped in, delivered a blow with his left and another swift, stabbing right, catching Neary over the heart. Neary crashed back into the ring of applauding men. He was quickly lifted to his feet and pushed back into the arena. His crooked fighting face drawn in a snarl, he rushed at the recruit. Strickland nimbly stepped aside, unleashed that deadly right again, but halted it in midair. Neary had stumbled, fallen flat on his face. A great cheer went up. It had been a good fight. Someone doused a bucket of water over the vanquished champion and others almost deferentially sponged Strickland's bruised features.

That evening* Neary was offered the opportunity of a return match as provided by the unwritten code of the force, but he declined and shook hands with Strickland. Later Dinsmore sauntered over to Strickland's hammock and invited him to sit on the floor-plates for a game.

When the smoke of their pipes had mingled Dinsmore broached the question that had mildly interested the guard-room:

"If it's none of my business say so, but how did you and Tuffy Neary happen to get in a jam anyhow?"

The recruit's blue eyes became suddenly hard, and he looked at Dinsmore in a disquieting way.

"No offense, Rookie," Dinsmore said promptly. "Really none of our business."

"No, it isn't, but I don't mind telling you. He made a wisecrack about Miss Quentin. That's all, just a wisecrack."

Dinsmore's leathern face slit into humorous wrinkles, but he did not grin openly.

"Affair of the heart, huh? Well, this oughta settle it."

"Don't know as it does. Miss Quentin is nothing to me. We're just friends."

"Well-o," Dinsmore commented, emitting a puff of blue smoke. "Don't let me discourage you, but you're in fast company. All of the ship's officers are barmy about her — our own Commander, too. Ever since that blue-eyed, black-haired little bundle of personality took over the signal office the ship hasn't been the same, so a rookie more or less—"

"I'll get my commission in time," Strickland stated.

"So-o-o! Easy goes. Sure you will, with your ambish, and you bein' like one of them movie gods they used to take pictures of, with that brown curly hair of yours, and the trim and athletic way you carry your weight—"

"Aw dry up! Ever since I got detailed to this outfit I was curious about that long

THE first voyagers into interplanetary space will undoubtedly be men of unusual courage and daring. They will build 'roads' thru empty space over which space flyers can unite the planets of the solar system, just as the cities of a nation are united by rail, auto and airplane. The navigators of such space ships must also be supermen by virtue of their strength, coolness and versatility in meeting the thousand and one emergencies in the infinite.

But the picture is not complete unless we include in our interplanetary itinerary the group of interplanetary police who will have to keep the space lines safe for humanity. There will be not only the rendering of aid to crippled liners but also the important task of protecting the space ships from the marauders of space who will inevitably track the void seeking for easy prey. Mr. Starzl gives us now a splendid picture of these daring "Hornets of space."

* Greenwich time is standard on the interplanetary lanes. All chronographs are set by it.

drink of water who's camping over near the corner port. Who is he anyway? Looks like he's lost his last friend."

DINSMORE waggled his slightly grizzling head in the direction of a patrolman, dressed, like the rest of them, in fatigue shorts. He was practically the only man in the room who was by himself. He sat moodily in his hammock, his lean, wiry figure drooping in an attitude of dejection. His dark hair fell in strings over his eyes, partially hiding a rather thin face. Efficient and well-trained as any of the troop in the daily routine, he retired within himself during the liberty periods.

"He's under a cloud," Dinsmore explained shortly. "Cowardice."

"Don't see how he can stay on the Force," Strickland remarked, looking at the man sympathetically.

"Oh, nothing to prefer charges on. Henderson was cornered by a gang of outlaws on Mercury six months ago. Had a bunch of valuable papers for delivery. If he'd held out for another 24 hours we'd glommed the gang, but when things got hot he slid out, losing the works."

R. F. STARZL

Strickland had been on the force long enough to realize the seriousness of Henderson's act. True, the regulations provided that the men of the I. F. P. seek their own safety in moments of deadly peril when no other lives were involved, but rare was it that a man ignored the unwritten code to obey this mandate of the Regulations.

Stretched on the plates under Henderson's hammock was a bulldog. He was a massive brute, with great, powerful bowed legs, an enormous wrinkled head and insignificant hindquarters. There was nothing odd about that, for the I. F. P. had lordly ways, and the General Order which authorized its members to take pets with them went above all regulations that might be in force for others on the same ships. Pets were good for the morale of the men, for often one of them might be on solitary post for a year on some insignificant little planetoid with no company save a dog or possibly an intelligent little Venus monkey.

But there was something odd about this dog. He had none of the natural dignity and composure of his breed. He seemed dejected, hangdog, as he too could not forget the shame of that retreat. Strickland commented on the dog.

"Calls him Hank," Dinsmore supplied. "Since this is just a convoy job, none of the other men brought their pets. But Henderson, he needs the company, sure 'nuff."

A couple of days later Larry Strickland's turn came for ship liberty. With five others of the troop he was allowed to roam the long corridors at will, to mingle with the passengers in the huge assembly sections—even to invade the sacrosanct navigating room in the nose of the shell, but Strickland was interested in none of this.

His first steps were to the signal room. Two operators were on duty, but not Marcel Quentin, so he sought her in the main assembly section. There were hundreds of passengers walking around between the tall columns of satin-finished metal that radiated like the spokes of a wheel from the central core. They looked like flies walking inside the rim of a wheel two hundred feet in diameter.

After a good hour's search he saw her, standing beside one of the quartz ports in the floor which afforded a wonderful view of the heavens in their slow, majestic rotation. She was alone, gazing down.

Strickland did not hurry directly toward her, but moved in her direction in an aimless way. A group of passengers playing a deck game came between them, and when

Strickland saw her again he received an unpleasant surprise.

Complications on Board

FOR she was affectionately greeting the pariah of the troop, Henderson. He had left his dog in his quarters, and had shed some of his depression. He spoke to her eagerly, and they were apparently absorbed in each other. Strickland had no desire to eavesdrop, yet he could not turn right around and go back. A group of young men in shorts and kirtles, and young women in flowing robes of the most fashionable and exquisite cut were watching him with evident amusement, not untinged by a very sophisticated sort of malice. He leaned against the guard-rail and looked through a floor port.

Then Strickland received another shock. Marcel lifted her maddening lips to Henderson. The tall soldier stooped to kiss her, turned sharply on his heel, and walked away. Burning with indignation, his price bruised, Strickland focused his eyes on the planetoid Eros, still half a million miles away, whose orbit they would intersect.

"Hi, Mr. Strickland, how's the force?"

There was no embarrassment in Marcel's sweet voice, nor in her radiant smile. "Why didn't you join the party?" she bantered.

"I didn't see him," Strickland evaded, trying not to be sullen.

"It was a surprise to me," she said. "He wrote he was coming, and I saw his name on the bulletin, but this is the first time I met him this year."

Strickland said nothing. He caught a glimpse of a sturdy figure in blue and brass, with the little yellow skullcap of the Service, coming their way. "Seems to be field day for the I. F. P." he observed.

"It's Mr. Neary," said Marcel. "If we stay here long enough we can call the roll. Good morning, Mr. Neary!"

Neary grinned, saluted. He was not unhandsome when he was pleasant, and the signs of his recent battle were fading.

"Saw Henderson here."

"Yes, he just left," Strickland admitted. He hoped Neary wouldn't start anything.

"Did you tell her?"

"Tell her what?"

"About Henderson."

There was a frosty glint in Marcel's eyes.

"What about Henderson?" she challenged.

"Know he's yellow, don't you?"

Smack! Marcel's small firm hand had connected resoundingly with Neary's cheek. The white imprint of it was drowned in a few seconds by an all-suffusing flow of red that climbed up his neck and flowed over his face.

"Didn't know you were sweet on him," he mumbled after a pause. The occurrence had created a mild sensation and everybody was looking.

"You fool!" Strickland growled. "I ought to burn you an extra one."

"Any time you want to try it!" Neary returned belligerently and moved away.

Strickland turned to Marcel.

"Miss Quentin," he apologized, "don't take Neary as representative of the Force. He isn't, really."

The girl's chin came up, and the tears which had threatened to well up subsided. Her voice was cool.

Thank you, Mr. Strickland. Some day you may understand."

Attack!

THE *Medusa's* navigator got busy as Eros came closer and closer. It was very unlikely that the ship should cross the little planet's orbit at exactly the right time to cause a collision, but Eros exerted a noticeable pull, and many lives depended on a safe margin being maintained.

Suddenly the alarm bell in the guardroom clanged. An instant later Commander Lander burst into the room, his tunic only half buttoned.

"Man your hornets!" he bellowed. "Buccaneer sighted off Eros. Probably his nest. We've got to get him before he gets us."

Each man sprang to his machine, those who had been on liberty catapulting through the door as they shed their dress uniforms and took up post. The small craft were quickly rolled through a gallery which led

to a chute near the center line of the ship. Here the "centrifugal gravity" was hardly noticeable, and the little ships could be handled easily. One after another they were pushed into the chute—thirty-three of them, counting the commander's.

The men climbed into the egg-shaped shells, pulled the safety hatches. The air-lock of the chute closed with a thud. The outer lock opened, showing a round section of black sky brilliantly studded with stars. Like the pugnacious little insects after which they were named, the fighting craft swarmed into space.

They flew in broken ring formation, this mentarily paralyzed by a penetrating beam, sweeping more than one of them at a time. At the same time the little craft kept weaving from side to side in a swift, much-practiced maneuver. Thus, if a pilot were momentarily paralyzed by a penetrating beam, his sidewise motion might carry him out of the beam before he could suffocate.

Larry Strickland, the recruit, took his assigned place some five hundred yards below the commander's ship, which was utterly without any distinguishing marks. The other ships were at similar intervals, making a huge, irregular ring some 1,000 yards in diameter, the separate units of which, at relative speeds of some 1,000 miles an hour and more, were very difficult targets.

"Increase intervals, speed 650." Commander Lander's steady voice came from the annunciator. Strickland repeated the order, as did all the other fighting men. An automatic radio receiving device would show Lander if the order was correctly received and repeated.

"Rotate plane 90 degrees."

The great loose ring approaching the buccaneer turned smartly on its edge, slipped between the big ship and the sun in whose overwhelming blinding glare it was momentarily lost. The outlaw was enveloped in a blinding blue haze as reverse rockets came into play, then in a break-neck swerving maneuver turned, sought again for a point of vantage before the sun.

Strickland studied the enemy ship. It was in some respects similar to the *Medusa*, but it was considerably older, and it had the slimmer, grimmer lines of a fighting ship. Painted in broad black near its nose were the skull and cross-bones. Came Lander's voice:

"Retreat 900 into the sun." Strickland grunted as the acceleration drove the breath out of his body. "For your information, men," Lander went on, "that's the old *Redoubtable* of the Martian Colonies Special Service. She disappeared mysteriously on an errand to Saturn, commander and personnel believed lost. Can't tell if the gang turned pirate. Doubt it. The ship was probably captured some way, crew killed. Anyway, they're outlaws now, and it's up to us to get them. When I give the signal I want you to break formation, every man fighting for himself. Whoever can, whenever you can, lay your egg on the hull. Repeat."

Every man repeated the order, and almost immediately came the command:

"Attack!"

LIKE an explosion, the ordered disorder of the ring flew apart, and the tiny hornets of the void dashed in to the kill. Only in the vastness of space was such speed safe, and not too safe either. Strickland found himself alone, with the battleship bearing down upon him, its rockets throwing out fanwise a brilliant double stream of electrons, ghastly blue, as vast and awe-inspiring as a comet's tail.

That pause might have cost the recruit's life, had it not been for the sun in back of him. The pirate did not see him. But Strickland, pausing a moment longer, saw a thin, metallic streak as one of his comrades dashed for the big ship's back. In another second the magnetic high explosive bomb would be clinging to the hull and the battle would be all but over.

But in that last, desperate sliver of time, the pirate ship suddenly disappeared, and in its place a vast, black formless cloud of stygian darkness thundered through space. The metallic streak struck that cloud with a shattering, though soundless, explosion. The fighting little hornet simply disappeared, blown to atoms by the stupendous, silent explosion of the bomb it carried.

Immediately the voice of Commander Lander came:

"Cancel that order. Attack no more. The pirate has developed some new form of etheric armor. It stops all wave motion, and also, no doubt, atomic and molecular movement. That's why we can't see him—light won't pass. If you try to carry an egg in, the violent molecular disarrangement in the explosive as it first touches the edge of the cloud will set it off. If you should succeed in getting one inside it prob'ly won't explode at all."

A pause, then: "Men, that was Johnson who was just killed. We'll make them pay for that. As long as that cloud's around them, they can't use their power rays. Neither can they see us or the *Medusa*. Globe formation, radius 1,000 yards, repeat."

Swiftly the avengers took their position, making a loosely woven globe around their prey. The *Medusa* had gone on her way toward that unwanted tryst with Eros. It is doubtful that the pirate had expected to find such a strong force of the I.F.P. with the *Medusa*. Ordinarily four men would have been considered enough. But it so happened that a certain La Bahn, operative of the S.S.S., the Solar Secret Service, had made a curt suggestion, which had been grimly and unquestioningly followed.

Commander Larner spoke again, betraying satisfaction:

"We've got him where we want him now. As long as that cloud's around him he can't see us. We can't hurt him and he can't hurt us. He can't tell where he is. He can't even change his direction. Probably his rockets won't work in the absolute zero—colder even than space, under that neutralizing blanket. We've got him!"

Brash theorizing! As if to belie Lander's words a spot of hazel light suddenly broke through the black cloud directly beneath Larry Strickland. He did not see the deadly beam that reached up for him, for he was in its very center. He was conscious only of an instantaneous paralysis—heard the cessation of the low buzz of the disintegrator motor at his feet. He was conscious of a numbing cold, and then he could not see any more.

He seemed to be slipping, endlessly, into cold, clammy nothingness, and yet there was feeling enough left in him to sense a violent jolt. The next moment his head was clear again, and his power supply functioning. Not a dozen yards away he saw another ship, the I.F.P. insignia on its blunt nose, circling the base of the stubby, serrated ram used for close-order fighting.

He saw the grinning, freckled face of Billy Ikon—he who could be trusted with a man's money and his life, but not his cigarettes. They were far out of formation. Billy, at the risk of his own life, had sideswiped Larry out of the hazel beam to safety. Now he thumbed his nose, waved his hand, and dashed back into formation, kicking Larry's ship with his rocket stream so that it spun dizzily in all directions.

The pirate forsook his passive role. Clearly the etheric blanket was controllable from the inside, for now the hazel spots were appearing in various places, providing at the same time an opening for the fighting weapons and means for sighting on the enemy. At the same time his rockets began to spew again.

The little hornets resumed their ceaseless weaving, but could not entirely escape the merciless fingers of light and baleful power that cut through space like solid matter. As Strickland turned he saw an I.F.P. fighter get caught in a hazel beam, saw his weaving maneuvers change to aimless drifting. The ship nearest dashed out to bunt it clear, but the beam was pertinacious. It clung to them both, followed them for a minute as they drifted away into eternal cold and death.

Several other ships went in pursuit.

"Stay in formation!" came in sharp command. "He wants us to cluster together. Watch your chances!"

Suicide!

SEVERAL of the fighters swooped down to drop their magnetic bombs. There was no gravity, of course, so the term "drop" is inaccurate. However, by diving straight at the black cloud, releasing the bombs and zooming away, the bombs would fly in their original direction. But in every instance

they exploded the moment their leading edge touched the cloud, and one unlucky flyer, tarrying a moment too long, was blown up, his ship still intact, so that he narrowly missed another ship. The gory spectacle through the quartz windows as he hurtled past was enough to forestall attempts at rescue.

Now the pirate chose to throw caution aside. For a short interval he unveiled himself, and with a quick, reckless sweep of half a dozen power beams, made casualties of nine more of Lander's force. Immediately he shrouded himself in darkness again, and ignoring the depleted remnants of the troop, darted off in determined pursuit of the *Medusa*, already a telescopic distance away.

The *Medusa* was making good time. Her rocket stream lay across space, a rapidly widening and thinning path of luminescence already bending away from the sun's light pressure. Of the ship itself nothing could be seen. Parallel to that telltale path, the outlaw plunged, and only twenty of the police ships were left to follow in the old ring formation. Ignoring them was not entirely a gesture of bravado on the part of the buccaneer. If he stopped to wipe them all out the *Medusa* might have time to summon help from the Martian orbital patrol, that planet itself being at the time far on the other side of the sun.

As the desperate chase went on, the little fighting ships harried the pirate from all sides, but he was immune. Lander gave a call:

"Will someone volunteer to dive into his rocket stream?"

This was almost equivalent to calling for a suicide, but several of the men immediately volunteered. The radio annunciator before Lander clicked briskly.

"Hartz, you try it. Drive straight into it. If you win inside the cloud, lay your egg and try to get out. Time it ten seconds. Good luck, boy!"

Hartz's hornet fell back, far out of formation. Then he came flashing along. There was a glimpse of sunburnt face mottled with gray—the acceleration was tremendous. Up in a breathless swoop. Now he was parallel to the backward-rushing blue stream, gaining rapidly on the point of greatest intensity where it poured out of the etheric envelope. The entire rear surface of the hornet blazed as with a supreme burst of speed it swerved directly into the opening. And then a soundless, ghastly explosion. The bomb had gone off prematurely, doing no harm to the pirate but killing the carrier.

But no! The pirate had not gone unscathed. He must have felt the shock. The cloud seemed to thin, and the pursuers could see the harsh outlines of the ship as through a fog. Then it strengthened, and the black blot in space rushed on toward the *Medusa* which it was overhauling fast. A few minutes ago she had come in sight as a mere glistening speck; now she was barely three miles away, and a sinister hazel beam was seeking her—seeking to paralyze one of her rockets, which would make her drive in a wide, futile circle to await the pleasure of the attackers. Her port rocket glistened as the beam caressed it, the blue blaze of its discharge glimmered out. The ship began to bear away from its course, to limp.

Savage and confident as a tiger, the pirate turned on the straggling police hornets again. The hazel spots blinked with bewildering frequency.

"Globe formation!" Lander snapped. "Radius 2,000 yards. On the order converge. Every man use his own judgment. This'll be a dog fight for good. All ready, con-*verge!*"

As steel flies to the magnet, so the remaining ships hurled themselves on the enemy. One who tried to carry a bomb through the black cloud was blown up. Two more, who had discarded their bombs, dived through the cloud and promptly drifted away in masses of wreckage. Their rams had not been designed to penetrate the stout plates of a battle cruiser.

Strickland had fought as in a dream. The incredibly fast and intricate maneuvers in which he had been drilled daily came to him spontaneously now. Unconsciously he maintained lateral movement, which drifted him out of the paralyzing beams several times. He had hurled his "egg" into the cloud and had enjoyed rapturous trans-

ports when it penetrated instead of exploding. But the bomb had simply not exploded.

IN that mad minute he dived, dodged, twisted, and every second death's hand was on his neck. Close beside him a ship drifted in the hazel ray, and he saw Henderson's unconscious face. Like a thunderbolt another came from above and batted Henderson's ship to safety. He saw Henderson resume his tactics at the same time the other ship, caught in the beam, started to drift. Strickland hurled himself against it. He felt an agonizing stopping of his heart. Then they were both clear. Through the strong ports he saw Neary, his face a mask of fighting fury, hurl himself again upon the outlaw, prodding blindly through the cloud, drifting out unconscious.

It could not last. The tide of battle was setting in stronger for the pirate. Londer in desperation gave the order to retreat to the *Medusa* for a final stand, and like autumn leaves before a storm the remnants of the gallant little force fled to temporary safety. Without a pause for orientation, the little ships dashed into the airlock, and in a few moments the survivors were helped out of their cramped quarters by white-faced skymen, members of the *Medusa's* crew. Six hours had been consumed in that disastrous fight, told here so briefly. It was after midnight, though the sun burned changelessly, and the passengers had practically all gone to bed.

Shipmaster Nailor, his florid face full of consternation, shook Commander Lander as he climbed out of his hornet and almost collapsed.

"For God's sake, sir! What are you going to do?"

Lander looked at him with a twisted smile and drawled:

"What the hell have we been doing all night? Fight some more, of course. Are the light projectors in shape to use?"

"We can get them ready in a minute. They're not unhooded."

"No, I suppose not. Get your crews on them, if they aren't sleeping too hard. Peck away at that cloud. There's a pirate battleship inside it, the old *Redoubtable*. By the time you penetrate that cloud you may still have power enough left to burn a little paint off it."

"Sir!" Nailor stammered, "this is no time for joking!"

"Sir!" drawled Lander, "I am not joking. All right, men, let's have a look at you."

They lined up, a scant third of the original troop. Lander recognized Strickland, Dinsmore, Ikon and some of the other survivors. The others were so battered and bruised as to be unrecognizable.

"Tough, men!" the commander smiled thinly. "All right, I'm looking over the fighting ports. You men reload your nests with one egg apiece. Wait in the chute. Where's Neary? I thought I saw him a minute ago."

"Neary was killed in the last mixup," a lanky patrolman with an ugly gash on his forehead reported. "He seemed dizzy, and crashed with another man, Jenkins, I think."

"I saw him just before we retreated, giving Henderson a bump," Strickland volunteered.

'Was Henderson killed? I don't see him." There was regret and pride in Lander's voice. Pride because he was an old man on the Force and held its honor dear; regret because his men were almost as sons to him. "I knew Henderson was all right!"

Ikon said nervously, his honest, good-humored face perplexed:

"Just when the fighting got hottest I saw Henderson hightailing past me toward Earth. When I looked again a minute later I could only see the wake of his rocket. Going some, I'd say. Then I was knocked out for a minute."

There was a blank pause. After a painful silence Lander managed in a stifled voice:

"All right, Mayes, we'll look over the fighting ports."

A wall annunciator rasped:

"Watch Officer, navigating room speaking. The pirate is shedding his cloud. He's drifting across our course about a half mile behind us, heading for Eros."

"What!" Lander leaped to one of the wall lookouts, waited eagerly for the ship's rotation to bring the pirate into view.

"That's right!" he exclaimed. "Looks like one of our bombs got him after all. But it may be a stall to get us where he can finish us quick. Nailor, see that your men are ready on post."

If the outlaw was shamming, he was doing a good job of it. The impenetrable cloud had thinned, allowing the ship to be vaguely seen through it. It was turning end over end, accelerating at an uneasy rate toward Eros—now ominously large—as a ship falling out of control would fall. Now and again its rockets would spout blue flame, but these fitful spurts only slowed its fall, could not stop it.

They watched it for a full hour, and the *Medusa*, her rockets again working splendidly, swept on her way, so that the early rising passengers only caught a glimpse of the sterile little planet being left far behind.

HAVING slept in the ship's hospital for fifteen hours, bathed, shaved and breakfasted, the survivors of the troop were all given ship liberty that they might bask in the well-earned admiration of the passengers. In their close-fitting blue uniforms, their trig skullcaps of fine brassy wires beautifully woven, they were well adapted to capture feminine hearts already stirred by the tale of their daring. Strickland, however, sought out the bulletin board of the main assembly section. Here he read Lander's official report of the battle. He scanned the closely printed sheets until he came to the paragraph he was seeking:

> HENDERSON, HYDE: Killed in final and successful attack on outlaw. No details are known.

There was a lump in Strickland's throat. "Say what you like," the thought ran through his mind—"Lander is a liar and a *prince!* Not for Henderson's sake, the yellow quitter, but for *her* sake—and for the sake of the Force's honor. I only hope the dirty coward won't ever show up alive again and let *her* know!"

As he turned to go he almost bumped into Marcel Quentin. He flushed guiltily, as if she could read his thoughts. Her usually mobile face was passive with recent grief, but it also bore the stamp of pride, and of love vindicated.

"Miss Quentin," Strickland stammered awkwardly, "I'm sorry! That is—your sweetheart—"

A flicker of a smile touched her pale face.

"He was not my sweetheart," she said simply. "He was my half-brother, but I really didn't feel called upon to make explanations to anybody. After his father was killed off Neptune, his mother married my father. Hyde was always a good boy, kind to me. I understood him." She smiled proudly, sadly, "*Didn't I?*"

Strickland looked straight into her tender blue eyes and blackened his soul with a lie.

"Yes," he admitted steadily. "Yes."

* * * *

Two year later, with the ink not dry on his commission, Lieutenant Larry Strickland of the I.F.P., because of his special knowledge of the battle, was given command of the *Spunky*, a squat, business-like little patrol ship, which was to take a delegation of learned experts to view the wreckage of the old *Redoubtable*, definitely reported and located on Eros but never closely examined.

By special permission he took along his bride, acquired about the same time as the commission. But when he and the experts donned their sausage-like vacuum suits for the work on the airless, frigid little dust-mote in immensity, Strickland was quite firm about making Marcel stay on the *Spunky*, almost precipitating their first quarrel.

With long, effortless jumps he and the commissioners leaped across the broken, harsh landscape to a scarred ravine in which the twisted wreckage had been sighted. They clambered about the sprawling mass of twisted metal, coming across the bodies, here and there, of the pirate crew. They were frozen hard, lifelike, except for the tiny droplets of blood that had oozed through the skin, and showed clearly the marks of terror, as slowly gaining speed in the weak but fatal attraction of Eros—while their air leaked off into space—they fell to

(*Concluded on Page* 607)

The War Lord of Venus

By Frank J. Bridge

What Has Gone Before

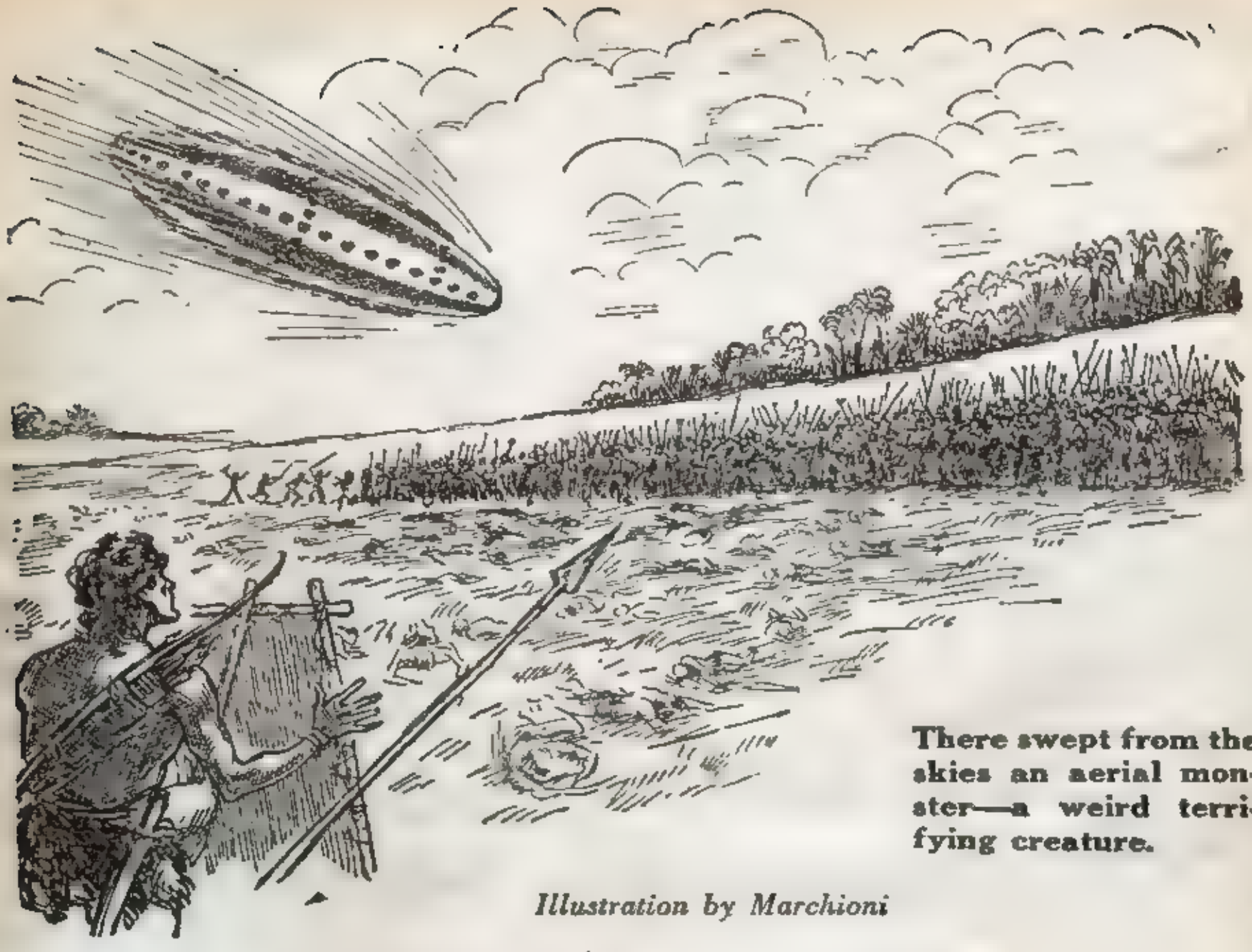
Four scientists, Kenneth Marx, an American; Ludwig Von Kressen, a German; Raoul Parri, a Frenchman, and Dr. Wilbur Throck, an Englishman, travel to Venus on Von Kressen's ship, THE FLYING DUTCHMAN. The ship operates by using the power of light to exert pressure and concentrating this power enormously.

Arrived on Venus they find it to be in the same stage of evolution as the earth was fifty million years ago. It is composed of dense jungles and inhabited by the dinosaur, pterodactyl and other creatures common to the earth during its early history. On an expedition, Throck is wounded by a spear-like rock thrown by some unknown assailant, believed to be similar to a low type of human.

One day Parri goes on a trip alone and does not return. Kressen and Marx (who tells the story in the first person) go searching for the missing man. They get on the trail of some barefoot two-legged beings who were evidently carrying Parri's body. They are finally attacked by a band of men resembling the Cro-Magnon men of the early human race and taken to their headquarters. They are presented to Deena, their cave princess, who taking a liking to Marx teaches them the language and finally offers to admit both men to their tribe.

Deena is kidnapped and Marx follows the kidnappers and helps to rescue her. He finally accepts her offer to become a member of the tribe.

Deena, the cave princess, is captured again by Torag, one of her chieftains. Marx gathers some warriors in pursuit, and follow them for weeks. He finally catches sight of her but is prevented from reaching her by a group of hairy Piltdown men who suddenly appear. After further searching, Marx finds Torag alone and in a battle kills him. Then he suddenly finds Deena beside him. She had escaped from the Piltdown men who had captured her. While returning back to their villages, Deena and Marx are captured by the Piltdown men and taken to their headquarters. Deena is confined in a cave and Marx is tied to a stake and is about to be killed by one of his captors when Kressen invades the camp with a group of Cro-Magnons and saves him and rescues Deena. But they are still outnumbered and take shelter in a cave where they hold off their besiegers while they send one of their number back for reinforcements. The reinforcements arrive in time, and the two earthlings together with the Cro-Magnons vanquish the Piltdown men and return to their own land. Marx then presents a plan to band together all the Cro-magnons to sweep away all the Piltdown men. They begin gathering troops and moving from one nation to another acquiring reinforcements. On a narrow mountain pass, Marx meets a ferocious bear and to avoid him jumps over a precipice and catches onto a projecting rock.



There swept from the skies an aerial monster—a weird terrifying creature.

Illustration by Marchioni

NOW GO ON WITH THE STORY

THIRTY feet of unscalable cliff separated me from the brink of the ledge possessed by the bear—who was curiously silent now—and a hundred and seventy feet of equally unnavigable cliff dropped away below me. No other projection was visible for a dozen feet. This summary of my present position speedily proved to me that I had but leaped from purgatory into Gehenna—I was worse off now than I had been on the trail. And the upper end of my bow was still splintering under the strain of my weight.

Presently the awed face of Manda peered over the ledge of the shelf upon which the sabre-tooth bear had first appeared. Wondering what had become of the original occupant, I ventured a glance around and downward, where I glimpsed the beast lying silent and motionless upon the rocks below, whither he had been preciptated by his momentum after my dive had cleared the track.

"Help me, Manda!" I pleaded, when I turned my gaze upward again to where he and Or were looking down at me with expressions of mingled relief and consternation.

Manda looked flustered. His willingness to be of assistance to me was quite apparent, but it was just as obvious that he was at a loss for a method of procedure.

"A rope!" I thought, "Haven't we got any ropes around here?"

Aloud I called, "A vine, Manda! Can't you get a vine somewhere?"

"I will try, Kenneth. Hold on a little longer," he rejoined, and his face disappeared from the cliff-edge, as did that of Or.

When they had gone I managed to struggle up to the projecting rock knob, which I grasped feeling considerably safer than

when I hung on to the ever-weakening bow.

Waiting for the return of the two Cro-Magnon men was a fatiguing and disheartening procedure, therefore it was with unutterable relief that I saw Or suddenly appear with some forty feet of a stout climbing vine he had found clinging to the cliff side.

He called to Manda, telling him that a suitable vine had been found, and shortly the young chief also appeared once more. As the end of the vine came within my reach I secured a firm grasp on it, and then with the two powerful cave-men dragging me upward with what occasional assistance I found opportunity to render, I soon stood somewhat weak and shaky beside them.

Recuperation was of immediate necessity, and was next on the program. Sitting on the ledge with our backs against the rocky bulk looming skyward, we debated as to our next action, but there was little to debate, for the darkling heavens warned us of the approach of night. Already our side of the mountain lay in dense purple shadow.

However, we all questioned the wisdom of spending the night on the shelf, for the great cave-bear's lair must open on it somewhere, and none of us had much stomach to elucidate to an inquiring ursine female where her recent husband might be found. Still, there was the possibility that our bear had been a bachelor, in which case we might as well avail ourselves of his cavern, wherever it might be.

But the former possibility was too strong, so the outcome of our council was that Manda and I curled up on a corner of the ledge while Or sat guard.

The night passed without disturbance, but at the break of dawn Manda and I were awakened by the *flap, flap* of great wings near us. Opening our eyes we saw Or fitting an arrow to his bow while he kept his eyes steadily fastened on a long-headed pteranodon—one of the great flying lizards of that perilous epoch.

As I have had occasion to remark before, the Venusian animals were of vastly greater dimensions than wandered our own Earth in the dim past, nor was the pteranodon an exception. This fellow's wing-spread measured a good forty feet from tip to tip—but I have seen individuals whose out-stretched wings spanned a hundred feet.

WITH this issue, we regretfully conclude this most unusual series of adventures — the strangest things that ever happened to four staid eminent scientists. We see how much readjustment we must make in order to live on a world fifty million years behind our own in civilization! But the conditions that our author pictures are just likely to be the ones we will meet when we make our first landing on that planet of mystery—Venus! And surely no more phenomonal thing was ever recorded than eminent scientists leading half savage tribes into warfare against each other!

Even as our eyes opened, Or let a strong barb fly from his bow. The shaft pierced the creature's left wing but there was no perceptible effect. Manda leaped up and also shot a bolt at the circling dinosaur, while I gripped my hatchet in the event that the lizard came close to us.

Manda's arrow had entered the reptilian dragon's breast, releasing a stream of thin, watery red blood. The wound irritated the brute, which hissed shrilly and then made a bee-line for our party on the ledge. As it shot toward us, its wide-open beak reaching for Or, I held my hatchet firmly and lunged forward, bringing down the stone axe in a crushing blow on the reptile's head.

From studying the skeletons of pteranodons dug up on Earth, I knew that the bones of this creature were hollow and lightly constructed. Therefore the heavy weapon in my hand had completely crushed one side of our aggressor's head and dislocated the long, flat bone projecting from the rear of the lizard's head, which served to balance the long beak, and also served as a rudder for the aerial dragon.

THE blow was the finish. With the thin, watery blood streaming from the side of its battered head, the reptile hissed once more, turned confusedly a number of times —its sense of direction and equilibrium completely destroyed—then fluttered wildly about, rammed headlong into the cliff on two occasions, and finally relaxed to plunge to its demise on the jagged rocks two hundred feet below.

A moment we three men gazed down at the limp remains of our late antagonist; then after eating a sparing breakfast we recommenced the ascent of the mountain. A short distance beyond the bend of the ledge where I had first seen the great sabre-tooth cave bear, we found his dwelling—a low, dark, stinky cavern running into the cliff. The ledge ended just beyond it, so apparently the only thing to do was to venture into the cavern in the hope that it would disclose some passage by which we could attain the outer air and an easier path to the village we sought.

Or admitted that the side of the mountain we had tackled was never used by the inhabitants of the cave-village above us, the regular trail being on the other side of the mountain. He had led us this way because if we found a way up on the hither side it would mean a saving of at least three days to us.

Manda at first opined that perhaps the bear's cave did not lead to any open space other than the ledge on which we had first made his acquaintance, but I pointed out I pointed out that since the narrow trail by which we had gained access to the shelf was quite unnegotiable to a brute of such size, it was obvious that some other pathway led to the cavern, by which the bear had reached his recent lair.

Since we had no torches or lights of any description with us, we held hands that we might not become separated in the dark, and then ventured into the cave, feeling our way slowly and carefully as we progressed. We entertained no fears of a second cave-bear for if there had been one, we assumed that we would certainly have met her during the night.

Feeling our course along ane wall, we had progressed about a hundred and fifty feet into the damp, cool passage, when Or, who was in the lead, announced that a stone wall barred further exploration. We came to a halt.

Presently Manda's voice came out of the darkness to my left.

"Look up! I see a faint light overhead! There must be a passage leading straight upward!"

FRANK J. BRIDGE

I looked. Sure enough, straight above us glimmered a little speck of murky daylight.

Manda at my request stepped upon my shoulders and felt above him with his hands for the sides of the vertical tube leading toward that little patch of light. But after several minutes of searching, in which I assisted by carrying him about, he could report only failure.

However, by exploring the rock wall before us with his hands he found a little sill some twelve feet from the floor. Onto this he clambered, and by again surveying the wall with his hands, discovered that it was sufficiently irregular to be navigated. We assisted Or to the ledge next, then they reached down as far as possible while I leaped up and attempted to reach the hand of one of them. Four times I failed due to the darkness concealing their outstretched hands, but the fifth time I caught that of Or, and after almost precipitating both of us back to the floor of the cave again, was eventually hoisted to the rock sill with my companions.

Now commenced the dangerous and none too-desirable process of scaling the unil-

luminated cavern wall toward that tantalizing little spot of grey light, whose distance we could not even estimate in that Erebean darkness. Each time I looked up at it, it seemed as far off as ever—a most dangerous illusion.

For what to me seemed hours and hours, we steadily ascended toward that elusive patch of light—hours of wearying climbing in a darkness as thick as that of space — hours of maddening silence broken only on occasion by the soft, sinister, shuffling, scraping sound of our naked feet against the wall of the cave, and the rattle of tiny grains of rock as they hurtled downward from the projections where they had been dislodged by our alien feet.

And at last, after seeming eons of ascending that perilous barrier in a motion that had become mechanical, there came a gasp of relief from Manda, who was in the lead, and in a moment Or and I sat beside him in a short tunnel leading with a slight upward trend to the open air ten feet away.

After we had rested for a half hour or so, we crawled out of the little tunnel into a shallow pit in the wooded slope of the mountain. Behind us a perpendicular escarpment towered four hundred feet into the murky skies, and I knew that on its other side was a sheer drop of eight hundred feet from the barrier's summit to the little ledge where the evening before we had encountered the great white-muzzled Stone Age bear.

THAT meant that we three men had climbed upward four hundred feet. As I visioned that tiny natural balcony so far below, my astonishment knew no bounds. That we three should have climbed up hundreds of feet of perpendicular cliff wall seemed absolutely incredible to me. It would have been a titanic feat even in daylight—but to be done in the dark was impossible. And yet—I wondered. Perhaps if the cliff we had scaled had been illuminated, we would have been unnerved at sight of the task before us, and once having made a start would not have dared look back to see how far we had progressed, lest the dizzy heights so appall us that we be precipitated from our holds. Yes, the more I dwelt on the thought, the more I leaned toward the idea that in the light the attempt would have been fatal, while as it was, the very darkness had made the accomplishment possible.

Slowly and tiredly we resumed the ascent of the now less precarious mountain side. The nut trees gradually gave way to scrubby growths of a hardwood type, though there mingled with these a sort of stumpy pine tree—or the nearest thing to our Earthly pine that can be found on the tropical planet.

We reached our goal just before nightfall, and after explaining our mission to the chiefs, partook of our evening meal, following which we made a public appeal to the congregated warriors of the village.

Weariness forced us to be brief and to the point, but when we gladly sought the chief's hospitality for the night, it was with the assurance that four hundred more sturdy Karnan fighting men were stationed under our banner.

CHAPTER XII

Preparing for War

WE spent the next day resting at this village, and the day after that took up the trail again to the five communities that were yet to be visited. Since it was quite apparent that it was impossible for us to descend the mountain on the same side that we had so perilously scaled, it was necessary to top the summit of the range and go down the western flank. This mode of procedure was accordingly adhered to, and at mid-morning we three, accompanied by another guide from the mountain cave-dwellings, reached the top of that great barrier, ten miles above sea level, and cast our eyes toward the second range that rose steeply on the opposite side of the narrow valley between them.

The assumption that the chain on which we stood was the highest on the planet had hitherto been dominant within me, but when my astonished eyes alighted on the next range across the valley, this hypothesis was speedily shattered. For the highest peaks of the opposite barrier tossed their sun-

bathed heads fully fourteen miles into the thick Venusian air.

We did not tarry long on the mountain top, for though, despite its altitude, the temperature was not low enough to clothe it in snow and ice, nevertheless the summit was swept with chilly winds that brought to our minds only too vividly our state of primeval and inadequate clothing. Especially Or and Manda, habitual dwellers of the lowlands, were affected by the unaccustomed temperature. They were shivering violently now; though our companion of the loftier districts, and I from past experience in widely varied climes, were less discomfited by the chilly air.

The path down this side, while infinitely easier than the precarious course we had pursued on our ascent, was so much the longer and therefore five days had passed ere we once more stood at the eastern foot of the mountain, our faces turned toward the northeast where lay our next goal.

To reach each village and explain our project consumed another week, during which we gathered some four hundred more men.

Then, our task completed in each of the thirteen outlying villages, Or, Manda, and I once more set our faces toward Karna itself, that we might see what results had been accomplished by von Kressen. In three days we reached the town, and immediately upon our arrival went into session with Deena, the Von, and the principal chieftains. I reported that some twenty-three hundred warriors had enlisted for the proposed venture, and the Skipper assured me that about eight hundred more could be reckoned on from Karna. All told, upward of three thousand brawny young Cro-Magnon fighters were ready for the warpath—no doubt the greatest accumulation of primitive soldiers that had ever been gathered for one campaign in the history of the untamed planet.

The day following the return of the Venusians and myself from our diplomatic mission, von Kressen and I sought the privacy of a large tree in the forest, where we fell to discussing ways and means for the prospective war.

"In the first place," was my inaugurating speech after he and I had safely esconced ourselves in the friendly, sheltering boughs of the tree, "We'll have to batter this gang into the semblance of an army. It would be silly to have three thousand wild savages running around and none of them knowing what to do—isn't that right?"

The Von silently nodded his agreement, and I continued:

"The first thing we'll have to do is organize companies and platoons, and that sort of rot. I've been thinking about that this this morning, and here is the result:

"Twenty-five men make one—well, let's call it a corporal's squad. After a while we can get Deena's term for it.

"Four of these squads make a company.

"Five companies make a battalion.

"Two battalions make something else.

"Three of those outfits constitute a regiment. Get the idea?"

The Von reflected a moment.

"You mean," he said then, slowly, "divide the men into companies of twenty-five, one hundred, five hundred, one thousand, and three thousand warriors successively?"

"Yes."

"And how about officers?" he queried.

"Each officer has command over a certain body of men. We'll do away with noncoms. We might have an equal number of reserve officers on hand though, so we can shove one in whenever one of our originals gets killed."

AGAIN my companion reflected. Then: "Weapons?"

"Bows, arrows, spears, clubs, hatchets, and knives. You and I, and perhaps one more will have the guns. I'll let Deena keep my revolver for protection while we're gone. We'll make a couple of catapults, and we might have a special company working with blowguns."

"That's O.K. with me. Let's tell Deena about it."

We hopped to the ground and shortly were discussing my plans with the Cave Princess, who supplied the terms for our divisions and their officers. Having secured her approval of the scheme, the Von gath-

ered a group of strong young bucks and launched into the construction of four crude catapults, while I went about among the chieftains, bestowing their new military ranks upon them and instructing them about their new duties and responsibilities. I also sent for the chieftains of the other villages, informed them of our plans, and assigned each one his rank, which I decided in direct proportion to the number of feathers that rose from his head-band.

In the end, by adding a few more men, we had an army of 3,160 men, which formed a body called an *athor* in Deena's tongue, and was commanded by a *kathor*. This *athor* of three thousand "privates", was divided into three smaller bodies called *atars*, commanded by *katars*, and consisting of one thousand warriors under fifty-three officers. Each *atar*, in turn was composed of two *ataks*, of five hundred men each plus twenty-six officers, including the *katak*. Five *atams*, each containing one hundred privates" and five officers, counting the *katam*, composed an *atak*, and each *atam* consisted of four *atans* of twenty-five men each, headed by a *katan*.

Von Kressen and I were not included in this table.

Of course, the inaugurating of this system covered some three weeks, during which time the Skipper had completed three catapults and was well started on the fourth. For a while I was uncertain how to identify the ranks of the officers, but presently decided on an armband of dyed feathers, the color thereof designating the wearer's position. Thus a katan wore a purple band; a katam a red; a katak a yellow; a katar, green; and the kathor—a grizzled old chieftain named Sagor, who had been Chief of Karna while Deena was absent—wore a blue armlet.

During this time I also had a company of scouts in the forests of the south, whose business was to observe the topographical contours of the country and report them to me, that the knowledge might be advantageously utilized during the impending campaign against the lower races of man. From their descriptions I managed to draw a crude map on the hairless inner side of a great tiger-skin. It was the skin in fact, that the Von and I had obtained that seemingly long-gone day prior to our capture by Deena's warriors, who had taken the skin along and finished curing it, after which Deena had returned it to me shortly following my entry to the state of warriorhood.

It was in this interim also, that I made an interesting and most opportune discovery. Or rather, two discoveries, one closely following the other.

The first was the finding of extensive saltpetre deposits in a cave worn into a sandstone bluff located a couple of miles east of Karna; the other, made barely a half hour later, was the discovery of two sulphur springs a little to the west and south of the saltpetre cave. On the edges of the pools quite a lot of the element had accumulated, and as I gazed down upon it the portent of my double discovery was vividly borne to my consciousness. Saltpetre, sulphur, and powdered charcoal obtained from burnt wood—mix them together and you have gunpowder.

The thought set my naked feet pattering rapidly toward the caverns of Karna, where on my somewhat breathless arrival I immediately informed the Von of the possibilities it incorporated.

"Figure, man! Bombs and hand-grenades! Arm our men with 'em and we can blow those unholy blighters down south clean off the map!"

"Yes," my companion agreed. "But what are you going to encase the powder in? What will you make your bombs of?"

On the March

I SCRATCHED my bearded chin and stared reflectively into vacancy. A cocoanut tree at the opposite end of the village centered my vision and attention.

"Cocoanuts!" exclaimed I. "Drill a hole in each end, let the milk run out, scoop out the interior with a bent bone, let it dry, fill it up with powder, stick a fuse of twisted bark-strings in one hole, apply a little incentive in the shape of a light, and watch the fun. Nothing to it."

Immediate work was begun on the proposal. First I led a crew of twelve warriors

to the sulphur springs, giving them instructions to gather the substance on the rims of the pools, then I led a second dozen to the saltpetre cave and commanded them to accumulate all they could and bring it to the village. Returning thither myself, I found the Von had started half a dozen fires and was already reducing a goodly amount of wood to charcoal. Other warriors were engaged, as were a good many women, in making holes in cocoanuts, the shells of which were to contain our explosive.

A little later von Kressen completed his fourth catapult, and on my inspection of the four, I saw that he had thoughtfully built them in such a manner that they could be easily folded into a compact bundle, all the long logs lying one way, to facilitate transportation through the matted reaches of the jungle. This idea of struggling through forty miles of virgin forest with four squat, heavy, ungainly catapults had been a source of worry to me, but I was determined to have the machines listed among our weapons even if I were forced to chop a road through the woods whereby to transport them. Von Kressen's construction of them, however, dispensed with this.

Manda, who was a katak, having five hundred men and twenty-five officers under him, was the first to present himself to me as a model of our expeditionary warriors. Standing six feet tall, clad in a loin-cloth of tiger skin, with his face and bare breast painted in garish colors by various berry-juices, he was a typical example of Aurignacian manhood. Across his spacious back, running from his right shoulder diagonally to his left side, was slung a quiver of long, strong war-arrows. A bone prong was attached to the outside of the quiver, and in this was clamped the strong bow. In his loin-skin, at the left side, was his stone knife; at his right hip hung a heavy stone hatchet; a knob-stick dangled from a thing in the front and a little to the left of the middle.

His right hand clutched his war spear, and his left forearm passed through the loops of a rectangular shield of tough hide stretched over a strong wooden framework. A stout stick running parallel to the shield's length, on the lower half thereof, was hinged at the middle of the shield so that when its loose lower end was unfastened from the thongs tying it against the bottom crossbar, it could be used as a prop against which to lean the shield, permitting the warrior full action of both arms.

Four weeks after our return from the allied cave-communities of Karna, Manda and I sent out runners summoning the recruits to Deena's village, there to be divided into the cohorts I have already mentioned.

Within a week they were assembled, properly divided, and fully armed. Our special blowgun company, our catapult company, and our engineers' company were likewise organized, equipped, and ready to march.

Quite a crowd had assembled, not only from Karna, but also from the dependent villages, to witness the departure of the greatest single army Venus had perhaps ever seen up to that time, upon the most specific undertaking ever attempted by Venusian mankind—the total eradication of all the lower human forms within a radius of fifty miles from the caverns of Deena.

Karna was a veritable swarming hive of painted, befeathered savages awaiting the order to march. Now, this day of the departure, as they stood in line ready for my command, I turned to Deena and handed her a revolver which I had in the previous weeks taught her how to load and shoot.

"I do not know how long we will be gone, Princess Deena," I said, "But when we return you will be the only ruler in all the land within five days' march of these caves. Here is my revolver for your protection. We go now—the gods of Karna be with you."

"And with you, Kenneth. May the best of success attend your mission."

I SALUTED, swung about, and marched to the head of the column, where stood Von Kresson and Sagor, who had already taken personal leave of the Cave Princess.

Reaching them, I swung around to face our troops. As I did so a hundred voices exclaimed in unison, "*Attention!*"

Over three thousand bodies, trained by four weeks of practice in their respective

villages, stiffened into rigid position and at the command of their officers saluted after the fashion von Kressen and I had taught them. The four highest officers, von Kressen, and I promptly returned it; then these five swung about and saluted me.

At the rapidly-delivered commands of the officers, three thousand long war-spears were with beautifully-executed movement swung over as many broad, muscular white shoulders; more than three thousand left feet extended; and at the word of march, three thousand, one hundred and sixty-two powerfully-built bodies surged forward into the firm, tireless stride of a marching army.

My earthly companion and I walked ahead side by side; a score of yards behind us the kathor strode beside the katar of the first atar; behind them marched Manda, first katak, with the first katam of his atak, followed by the first katan of the company, and after him trod the warriors of his atan.

The warriors marched five abreast, covering a front of twenty feet, while five feet separated each rank from the one before and the one following it. Behind the last row of each atan marched the katan of the next atan, separated by ten feet from the men before and those after him. Twenty feet parted the katam of each company from the last warriors of the preceding atam, fifty feet lay between the katak of each atak and the bare backs of the men before him, and a hundred feet separated each atar from its predecessor.

Thus our column was over six thousand feet long as we moved away from Karna into the forests toward the south. Our catapult, ammunition, and supply companies were at the end of the column, as the preceding warriors could thus beat an easier trail for the heavy accessories to be transferred by.

Once when we were half a mile from the confines of the village, and just beginning to enter the really dense jungle stretching about us, I turned for another glance toward the grim crags that sheltered the race for whom I was leading this campaign. There on the highest point of the village, separated a little from the onlooking crowd and silhouetted against the sullen grey clouds in the background, stood a silent, motionless figure—Deena, Cave Princess of Venus.

It was for her that I led her forces into the field, to rid her territory of dangerous enemies, and to establish her supremacy on the untamed planet that had given her life.

Again I faced the south, and with my next few steps the green jungle had formed a screen about us.

CHAPTER XIII

Through the Jungle

THREE days we marched into the jungles of the south—three days of slow, drizzzling rain and rather chilly air. The grey canopy above never broke to admit even a dim bar of diffused sunlight. There was only the unceasing cold drizzle that was wafted through the forest on the winds, and accumulated on the leaves of the trees that our passing might dislodge it, to descend on our naked shoulders in irritating showers of cold spray. Underfoot there was only the soft *sqush, sqush* of marching feet on the water-soaked ground with its thick mat of decaying vegetation. The few birds were silent and motionless; we neither heard nor saw any of the greater denizens of the tangled wilderness that embraced us, though on a few occasions we heard the rustle of the jungle grasses as they were parted by the passing of some great snake; and of human forms of any kind we encountered no sign.

Gloomy weather induces gloomy spirits, so as our little army trudged through the carboniferous forest there was little conversation of any nature, though intercourse in low tones was permitted.

No event of importance occurred during the first three days of the march, but on the fourth the vanguard of our column burst upon a band of some two hundred Piltdown men who were traveling toward us. Since the greater part of our force was still hidden in the jungle, the Eoanthropi, who were crossing a little boulder-strewn field when our van discovered them, evidently assumed that they were facing a party considerably smaller than their own,

so they stood their ground determined to stay our progress.

As might be expected, a lively skirmish ensued between the two forces, but since we were better armed than they, it was but a matter of minutes ere half of them lay dead and wounded on the ground, the rest scampering hastily in all directions into the bush. Our side had suffered the loss of one man; though a score of us, including the Von and me, bore minor bruises where we had intercepted the hand-hurled missiles of the Dawn Men.

The encounter had delayed the advance of our van, so when it was over the main body of our troops was already emerging upon the field. But it took merely a few minutes to re-establish order, and we continued toward our goal, which was a Dawn Men cave-village still some six miles to the southeast of us. In the preceding weeks my scouts had reported to me the location of all such communities within fifty miles of Karna, and it was my intention to make a round of these villages and force their evacuation. Our prospective route was a zig-zag chain of villages running east and west, at the eastern end of which we were to start our drive, working westward and finally curving north again to return to Deena's caverns.

Nightfall found the Cro-Magnon army entering the village to discover it deserted. Every cavern was silent and empty, though the remaining chunks of half-rotted meat and recently ground maize indicated that the town had been inhabited up to a very short time before our arrival. What had occasioned the town's desertion we were at a loss to determine, but the German offered the opinion that the survivors of the forest skirmish had returned to this village and warned the occupants of the approach of our force. I pointed out to him, however, that inasmuch as the Dawn Men certainly could not know whither we were bound, they could hardly have been able to announce our advance upon this particular community. But von Kressen argued that even if our intent was not apparent to the Piltdown men we had encountered on the little boulder-strewn plain, they had nevertheless warned the inhabitants of this and perhaps other nearby cave-towns of our dangerous proximity, and the settlements had been evacuated against the possibility of an unfriendly call on our part. It was a logical possibility, of course, and so I accepted it; but I doubted if any other villages had received word of our coming, for I deemed it unlikely that a race as comparatively low in civilization as the Piltdown men held any intercourse or mutual alliance between communities.

Nevertheless my wonder was unbounded as I was forced to accept the Skipper's theory the next day, for as we entered the second village of our chain, after having met no Dawn Men who could have spread an alarm, we found this one as completely deserted as had been the first.

"THIS affair looks rum to me," I informed von Kressen, "I'm willing to bet a hat that each and every Eoanthropus village is totally independent of every other one. A people as low in civilization as the Piltdown race doesn't know the meaning of any feeling except hostility toward other communities. It's an all-fired wonder to me that they are able to congregate in villages as it is. I'd hardly expect a bunch of untutored savages to gather more than one family together."

"Mutual protection, young man; mutual protection," he insisted.

"There's enough protection for one family by the males of that family. They don't give two hoots what happens to their neighbor, as a rule. Nope, I'm telling you, Von, there's something odoriferous in Denmark about this."

The next day we began the march to the third village, and shortly after our start saw signs of the proximity of Dawn Men. As we moved through the jungle, on several occasions jagged rocks flew from the undergrowth into our ranks; two or three times we saw the shadowy forms of Eoanthropi melt silently from one patch of gloom into another; and always to our ears came the soft, rustling sounds of many shaggy bodies moving through the grasses

beside the trail, and among the closely-netted branches above us.

"It seems," said Sagor to me, "that the hairy ones wish to slay us all gradually while we march through the forest. They have us at a disadvantage, for while they can easily discern our white skins, and we are closely ranked, we cannot very well see their dark bodies scattered among the trees."

He was right. As the day wore on a number of our warriors fell beneath the crude weapons of the Dawn Men while we killed but one, and him only because he was precipitated into our very path by the breaking of the limb on which he had stationed himself. Since we rarely saw our foes we had no way of determining their numbers, but I guessed at a couple of hundreds—though for all the sight we had of them they might have been less than a score. Manda once suggested that we break up our column and send the warriors individually into the bush to fight our annoyers with their own tactics, but I rejoined that such a procedure would delay our progress too much. So we compromised by sending our blowgun company into the jungle to fight as the Dawn Men fought—concealing themselves in the trees and the undergrowth, and when a foeman appeared, picking him off silently and singly. Thereafter our casualties experienced a marked decrease, while those of the Piltdown men correspondingly mounted.

That night we slept in the open, for the village that was our goal lay still a good half-day's march before us. Traveling through the jungle at night is suicidal, especially in such forests as cover the continents of Venus; for where the night rain is unceasing, the savage carnivores abroad during the early nocturnal hours, and the poisonous reptiles lurk constantly in the shadows before one, the dangers and slender chances of survival that accompany such travels can be readily perceived.

For the most part we slept in trees, after we had assured ourselves that they harbored no snakes (by making a hissing sound that would invariably elicit a similar noise from any snake that chanced to be in the vicinity). The Flying Dutchman and I could not reproduce this hiss in its exact value, therefore we procured Manda to do it for us.

When the noon of the following day saw our advent in the third village of the line, we found it as completely deserted as had been the two before. It occurred to me that perhaps the inhabitants of the first two settlements had re-esconced themselves in their caves after our passing; therefore in order that our campaign should not be useless, I sent back two companies to enter and hold each of these villages, and when the next day we undertook the march toward the fourth town, one atam was left behind at the site we then occupied.

It became more and more apparent, the farther we progressed, that the Piltdown men of a number of villages had combined against us; their attacks became constantly more frequent and more determined; we saw groups of them slink furtively along the ground or swing silently through the branches of the trees, in which they seemed to be as much at home as on the ground.

Once a body of some fifty or sixty of them boldly attacked the very middle of our column, delaying the march for a good half-hour while we beat them off. Nor was their sally by any means devoid of success, for eight of our number were slain, twice as many more or less seriously injured, and one missing. Extensive and painstaking exploration of the surrounding locality yielded no sign of the vanished warrior, while but detaining us the longer.

Guerrilla Warfare

WE were a thoroughly disgruntled bunch as we cast aside the two dozen dead Dawn Men and resumed our interrupted march, hampered somewhat by our wounded comrades.

"Say, do you know," began the Skipper, breaking in upon my moody contemplation of the foe's latest escapade, "I think those wild devils are being coached by a leader who is perhaps of the Cro-Magnon race. Ordinarily these brutes wouldn't have the intelligence to gather several villages together to combat an enemy, but with a

human brain—like that of a Cro-Magnon man—to guide them, they would make a formidable bunch of antagonists. I'll bet a cookie there's at least five hundred of the hungry bounders out there in the sticks, and you can't tell me they all got together by their own incentive."

"Adopting my views of Dawn Man psychology, are you?"

"To some extent. I'd readily admit the possibility of one tribe warning another of an approaching common foe, but I place it above their mental capabilities to combine against that enemy unless urged to do so by an intelligence higher than their own."

"And you deem that intelligence to be a Cro-Magnon?"

"I do."

"But how do you imagine he might have gained their confidence to the extent that they would obey him?"

"I can't say for certain, but by using his brains a man could not only escape death at their hands, but could even gain a position of leadership—at least, I should say so."

"Well, maybe you're right; but while Deena and I were captured by that bunch, I used the old coop plenty, yet *I* didn't rise to any position of leadership."

"Yes—but you don't understand these Piltdowners. But a man who has spent his entire life living near them, understands their customs and perhaps their language—that's a different case."

"That may be. But who do you think could be this—ah—Master Mind of the Dawn Men?"

"Haven't the faintest idea, unless maybe one of Torag's men escaped your bunch and got in with this Piltdown crowd."

For a week we continued westward, entering nine cave-communities that belonged to the Piltdown race, and one small one occupied by two or three families of Neanderthal people. All but the last mentioned were deserted, the inhabitants apparently having been warned many hours previous to our descent upon their strongholds. The Neanderthal village, if a straggly group of half a dozen crude mud huts can be so termed, was the eighth we entered; and the fact that it was inhabited showed that no alliance existed between the Neanderthals and the Piltdown men.

Upon our stormy entry of the hamlet, the Neanderthal males bristled up and fell upon us with furious and utter abandon, notwithstanding our superior numbers; but ere they could do us much harm they lay dead on the dank loam, all abristle with the pitiless arrows of our soldiery. The females and the young for the greater part scampered into the jungle, though a few of the older and more savage women remained to meet the same fate as had their lords and masters. There was not a one of us who did not dislike the idea of killing even these savage, ape-like women, but we risked no possibility of jeopardizing the safety of Princess Deena by permitting the survival of these wild races.

During that week the Eoanthropi harrassed us incessantly, on several occasions attacking the column in bands of from three hundred to five hundred individuals, and the results of these encounters were truly disastrous to us. By the end of the week we had lost some five hundred men, while we were able to ascertain the death of but three hundred opponents. It was clear that as long as we remained in the forest the advantage lay with our semi-arboreal antagonists, and so the only course to follow was to get both forces out into the open where I might adopt strategic measures toward the crushing of the Dawn Men. Accordingly, we laid our steps toward an open plain a little to the southwest, while runners were sent back along the trail to gather the thousand or so warriors who had been left to guard the various villages against the possible return of the Piltdown men.

Two days were occupied in moving my men to the plain whereon I hoped to establish the supremacy of the Cro-Magnon race, and during this time we were joined at intervals by the different companies, or atams, that had comprised the guard of the different towns. Our hairy annoyers still kept pace with us, which was what I hoped for because it gave me a chance to lead

them into the open where I might then defeat them.

As the first five villages were too far back to permit their new garrisons to reach us before we came to the prospective battlefield, our force numbered roughly two thousand men plus about one hundred officers. However, I felt quite confident that these would prove sufficient to bring victory to our cause even should the Dawn Men be as numerous as we, which I doubted.

REACHING the open plain, which was about six miles long and perhaps four wide, the Von and I marched our force out across it to a position near its middle. Here I strung out the warriors in a long line facing the jungle from which we had just emerged, with the catapult company behind the bowmen, and the sixty or so remaining blowgun warriors placed at intervals just before them. My eighteen hundred heavily-armed soldiers were placed in three ranks, about six hundred men in each line. The first left their bows on their backs, and lying prone on the soil, gripped only their heavy spears.

Should the Dawn Men charge us, then these spearmen were to receive the first ranks of the Eoanthropi on their spearpoints. Behind them at some twenty feet were the first bowmen, who were to do the long-range fighting by shooting their barbs over the spearmen before them. And some twenty feet behind these crouched another row of bowmen, ready to step into the places of those who might fall before them, and who, if necessity arose, could shoot while men in front fitted new arrows to their bows.

Of course, this in itself did not take long, for they could shoot almost as rapidly with their bows as a civilized Earth-man can with a repeating rifle; but there are occasions when a steady, unbroken stream of wooden shafts is highly desirable. Some fifty feet behind these were the four catapults, placed at intervals of some five hundred feet, thus covering a front about two thousand feet in length. The men before them, placed about four feet apart, covered a frontage of roughly half a mile. The one hundred men who composed the supply company were stationed as sentries to guard our rear and flanks, and to give warning should the enemy menace us from those angles.

Sagor, who held the Skipper's automatic pistol, was stationed on the left wing, von Kressen on the right, and I took a central position where I might see how the battle progressed along the whole line.

Once safely barricaded behind our propped-up shields, I sent the blowgun company back to reconnoiter and stir the Eoanthropi into the fighting mood, after which they were to be led to our present position.

As the men vanished into the haze-veiled distance, the Flying Dutchman and I made the final rounds of our position, saw to the distribution of the arrows and the powder-filled cocoanuts, gave minor orders here and there, and presently returned to our respective stations.

Barely ten minutes after I had again resumed my post and given my rifle its final inspection, the forms of the scouts we had sent out came running from the distant fogs, closely followed by the burly shapes of the Piltdown men. I leaped to my feet and ordered the bowmen to have their weapons in readiness.

Running my eye over the front rank of the Eoanthropi, I noted with some astonishment that it measured nearly a mile in length—as far as I could see in fact (the mists hid anything further distant than half a mile from one point)—and if I could average five-foot intervals between the savage men, there must be some one thousand Dawn Men in a line. And the force that opposed us was five ranks deep.

For the first time during the entire campaign a qualm of apprehension overwhelmed me. It was true that my Karnans had the advantage of superior weapons and —if I may flatter myself by so saying—superior leadership; but when the opposing force is two and a half times as great as one's own, it does not require an excessively elastic imagination to perceive that there is going to be trouble despite the

few advantages one can number among one's assets. However, nothing could be done now except go through with it and hope for the best. I still believed that we would win, but I saw that we would have to pay heavily for our victory.

CHAPTER XIV.

A Terrible Battle.

WAITING till the Dawn Men had come within range of my men's arrows, I quickly passed the command to concentrate fire on the last rank of our opponents, and gave the word to shoot.

Almost as one, six hundred bows twanged out upon the humid atmosphere; six hundred strong wooden shafts darted into the air toward the oncoming Dawn Men; and nearly five hundred of them buried themselves in the bodies of the savage foe. Two hundred Eoanthropi were killed or mortally wounded on the spot; a hundred more sank with less dangerous wounds to the damp loam, there to tear free the offending barbs and break them; and some two hundred others remained in the running, though not without some painful reminder of the efficiency of the Aurignacian bowmen.

The second and third volleys brought more or less similar results, so that within two minutes some six hundred Piltdown warriors lay hors-de-combat on the field. Our own losses were so far nil, but I saw with some anxiety that the flanks of the Dawn Men's line were still intact; and extending about a quarter of a mile beyond each of our own ends, were slowly swinging in to crush our wings.

Ordering rapid fire from two hundred bowmen at my sides, I commanded that our wings swing backward and inward, forming a V with my own position at the tip, facing the center of the Eoanthropi's line. Disliking the idea of moving back the catapults without a single shot after they had been so well established at their present stations, I passed the command that each machine fire three of our gunpowder-filled cocoanuts.

I may say here that by inserting a short fuse in the shell and then placing a light cap over the hole after the fuse had been lighted, the spark was protected from the air-rush, while still gathering sufficient oxygen to permit it to reach the powder. These shells were used in the catapults, and such were now flying through the air toward our shaggy antagonists.

The result was startling, even to von Kressen and me. In rapid succession twelve of those crude yet potent projectiles exploded with ear-shattering booms. Great billows of black smoke burst suddenly into the air, and some fifty Eoanthropi lay dead or stunned on the plain.

With the explosions the remaining Piltdown men came to a startled halt, awe and consternation mingled on their faces. All their morale was gone, and I realized that in another moment they would take to flight. But I was determined to have the battle out, and so barely had the Eoanthropi stopped than I leaped forward with a cry.

"Prepare to advance! Advance! *Charge!*

The Karnans grasped their war-spears and leaped forward, while the third rank at my command poured arrows over the heads of the first two, into the lines of the Dawn Men. The foe stood undecided before us. The episode of the shells counseled the savage warriors to prudently betake themselves to distant parts, while the sight of the approaching Karnans—a more tangible enemy, whom they could more easily understand—urged them to remain and annihilate us. So they hesitated, and as they stood thus the first line of Cro-Magnon spearmen fell upon them.

Then the battle started in earnest. Thrusting, slashing, clubbing, howling, roaring, and shouting, the two armies met in what I'll wager was the bloodiest encounter in the history of the untamed planet. The barbs of the Karnan bowmen flew thick and fast; the clubs and axes of both parties splattered afar the lifeblood of the enemy; and ever and anon the firearms of Sagor, the Von, and myself, barked out their sharp, brief sentences of death upon the hapless foemen. In a trice that mist-covered plain

had been transformed to a raging, seething hell of hate and slaughter and deafening, discordant racket.

Occasionally I retreated for a brief moment that I might cast my glance toward the wings and see how the battle fared there, then I resumed my warlike activities at the fore of the Karnan line. It was with some satisfaction that I saw Deena's warriors beating back the Eoanthropi, despite the numerical superiority of the latter. Yet that we were not to come out of the encounter without losses was proven by the one hundred or so white troglodytes who lay silent and lifeless beside the corpses of their wild antagonists.

It was during one of these spells that my attention became centered on a particularly agile and outstanding warrior in the ranks of the Piltdown men. Standing head and shoulders above his wild companions, he was as tall as the average Cro-Magnon man; he was less hairy than those with whom he fought; he was straighter, more agile, and seemed to be barking commands at the Dawn Men about him. Taking the leisure to observe him more carefully, the conviction rapidly grew within me that he was no Eoanthropus, but as human as the splendid race with whom I fought shoulder to shoulder. Through my mind flashed the Von's theory that the Dawn Men had been gathered by an individual with greater intelligence than theirs—and here, it seemed, was that man—a Cro-Magnon, no doubt, who may or may not have been a member of Torag's party when that enterprising gentleman undertook the abduction of Deena, Cave Princess of Karna.

AS I watched the strange foeman, I could not help but marvel at the smooth, effortless rhythm of his muscles, so unlike the bulging, knot-like affairs of the Eoanthropi. His lightning-like movements proceeded with a speed and precision that betrayed a keen, trained brain directing them, while the authoritative timbre of his tone, even in the guttural grunts of the Piltdown men, bespoke all too plainly the position he held among them.

Then there was also a vague familiarity about him that roused my wonder; I was confident that I had seen him before, but I could not definitely recall where. It occurred to me that I had doubtless seen him among the henchmen of the ambitious Torag, and that dim recollections of his manner haunted my consciousness, to be brought forward when I again saw the man.

Realizing that the man was a dangerous and therefore undesirable foe, I temporarily forsook my section, to work my way toward the point which he favored with his bellicose activities. Should he indeed be a former follower of Torag, as I firmly believed by this time, I considered it only meet and just that I should entertain him with my personal attention. The rough handling of the Cave Princess by Torag's party, as well as the many subsequent dangers and hardships she had to endure because of their attempted abduction of her, still rankled in my mind, as it will continue to do for the rest of my life. Therefore it was a very personal motive that induced me to engage the warrior myself.

As I neared him I saw the Piltdown leader attacked by three of my Karnans, and despite the cold hate I held for him, I was forced to reluctantly admit my admiration as I saw him dodge the first attacker and swing a mighty right to the jaw of the second—a blow that checked the Karnan, jerked his head back sharply, and then brought him lunging face down into the grasses at the feet of his enemy. Then the leader of the savage hordes we battled clutched his stone knife and sprang toward the young Karnan chieftain who opposed him. The latter I noted was Manda, and as the two engaged in a swift knife-duel I pressed forward more rapidly that I might render assistance to the young chief, should he require such.

It was with some apprehension that I beheld the naked stranger forcing Manda backward slowly toward the outstretched carcass of a fallen Eoanthropus, and as his design became apparent I jerked up my rifle. In a moment the young Karnan's heel would strike the dead body, he would stumble backward—and one of the best friends

I ever had would be gathered to his forefathers. At the realization, the bead of my rifle covered the forehead of the savage warrior who led the Dawn Men. Knowledge of Manda's impending death spurred me to fire; and at the same time something clamored at the back of my brain, begging me to desist, attempting in its feeble way to turn aside the muzzle of the gun from the inhuman brute who was working out the youth's death.

Curse it! Why couldn't I shoot the devil?

Then I saw the man's stone blade leap forward and sink deep into the chest of Manda the Fleet One—the nameless spell that held me broke; and cursing myself for delaying until it was too late, I sighted at the giant's forehead and squeezed the trigger.

At the report he turned a startled face in my direction, and as he pitched forward to the blood-flecked loam, my blood turned to ice—for in that one brief moment I recognized even behind that savage manner and the seven months' growth of black beard, the face of my old friend and companion—*Raoul Parri!*

CHAPTER XV.

The Air Monster

EONS passed, it seemed, while I stood there motionless—stunned. The fierce struggle about me, the shouts and growls of the contending armies, the speeding missiles, the reports of von Kressen's rifle, fled from my consciousness—receded into the dim distance—leaving me standing like a stone image, contemplating the two sprawled-out bodies before me. No sensation of any form raced through me during that time—it seemed that my mind was incapable of functioning. The realization of the white stranger's identity, my action toward him, and his last act toward Manda the Fleet One, had tumbled over one another so rapidly that my sensibilities were left paralyzed—and I viewed the two men with the cold, impersonal air of an aloof and totally disinterested spectator. If some similar occurrence has ever happened to you—something that knocked your world from beneath you—something that knocked the props clean out from under your scheme of things—some occurrence whose magnitude your mind was unable to grasp at the first instant—then you will know what I mean.

So it was now. Ages seemed to pass while I thus stared at Manda and the Frenchman, but I know that it was but a moment ere I regained my powers of thought and movement.

"*Von!*" I shrieked, jerking around toward him, "Come here—for God's sake!"

From my tone, my look, and my gesture, he must have surmised that some weighty agitation gripped me, for barely had he turned his gaze upon me than a puzzled gleam shot into his grey eyes, and promptly forgetting the raging battle about him, he bounded in my direction.

My finger shot toward the lifeless shape of Raoul Parri, stretched full length upon the ground, as the Skipper came up beside me.

"Von—!" I gasped, my voice thick from the choking lump in my throat and the dry tongue that seemed to be swollen to twice its normal size, while queer tingling sensations raced through my scalp and along my jaws, "It's—it's—*Parri! Raoul!* I shot him—dead, most likely—!"

Eyes widening in horrified surprise, the German gaped motionless for a second as I had done before; then with a common movement we leaped toward the fallen bodies—he to the Frenchman, I to Manda.

It was a bloody, hideously torn gash that traversed the young chieftain's breast—a deep, frayed wound extending from the middle of his chest upward across his right breast almost to the armpit. Had I not long since become inured to the sight of blood, I should certainly have been sickened by the thick stream that gushed from the gaping injury in Manda's chest, to stain scarlet his white skin and the already blood-soaked sward beside him.

Reaching for his wrist, at the same time I placed my ear to his breast, and it was with unutterable relief that I heard and felt his heart's weak but steady beat continuing within him. Summoning two near-

by warriors, I bade them transport the wounded chieftain to the medicine men behind the line, and as they gently picked him up and departed I turned to the Flying Dutchman, my question in my eyes.

"He's still alive," replied von Kressen to the unspoken query he read therein, "but the wound—"

"Fatal?"

"Not necessarily. But it's serious—damned serious. Unless he gets immediate and competent treatment—"

Silence descended. That is, neither of us spoke, but the cries and noises of the surrounding battle continued unabated.

Two more of our fighters who chanced to be close were summoned, and these I ordered to take the badly wounded French astronomer and bear him behind the lines.

Again the battle claimed our activities, but the German and I fought automatically, our minds dwelling more upon the incidents of the past five minutes than upon the savage encounter that swept and stormed about us.

I do not know just how long we fought, but I had a dim realization of beating the Dawn Men back about half a mile from our first position; I reflected vaguely that some two thousand Eoanthropi were gathered in by the Ultimate Victor, while some four hundred Cro-Magnon warriors likewise lay stretched in the last long sleep upon the gorestained battleground. Then our progress was checked with a jarring suddenness, arousing me from my reflections to see what had occasioned our abrupt halt.

Observation quickly settled this point, revealing that the arrows which my men had taken with them were for the most part expended, and that hand-to-hand engagement now held the field. While we still maintained a superiority in the quality, quantity, and proficiency of weapons, the numerical strength of our foes balanced this and brought us to a deadlock, since the odds were no longer with us.

Indeed, outnumbering us nearly two to one, the Dawn Men shortly found the chances of success swinging over to their side, and so within a little while we were being forced back along the bloody path we had mown.

A company of men was sent back to the station where we had first established ourselves, to bring arrows for those of us at the battle line. Meanwhile we beat an unhurried retreat, the steadily-mounting losses on both sides being nearly equal. Soon the men came back with the arrows, and with these we managed to stave off the Piltdown men and swing the odds back to our own ranks again. However, the recent hand-to-hand fighting had seriously depleted my force, and I deemed it wise to disengage ourselves of the enemy, retreat hastily, and re-organize the scattered groups of Karnans so that we might deal a crushing blow to the Eoanthropi, who would certainly follow us should we exhibit the inclination to show them our heels.

Hence the command was rapidly issued that an immediate and undignified retreat was to be made, and though the Karnans obviously disliked this disgraceful procedure, they nevertheless promptly and unquestioningly complied. In a few minutes, therefore, we were once more barricaded behind our shields in our original position, awaiting in grim satisfaction the howling Dawn Men who evidently supposed their militaristic prowess to be the cause of our flight. They were rapidly following us with the all-too-apparent intention of bringing about our immediate annihilation.

Surprises had been quite in order during the day, and the greatest surprise was yet to come. I don't know why I didn't notice the thing as we ran back to our shields, but I suppose my face was turned toward the enemy during the flight and so I saw no sign of the silent thing hovering in the mists behind our position. Anyway we were again embanked behind our shields, if I may use the term, bows and arrows in hand to give the enterprising Eoanthropi a hearty reception. Some degree of apprehension assailed me as I noticed that the enemy was pressing toward us in a compact, knot-like formation aimed directly at the center of our line—an irresistible battering-ram that would plow through our

defense as were it but a thin cotton thread. To meet the foe on more even terms, I ordered the concentration of my own army on that point where the blow would fall, and commanded that the catapults be trained on the advancing Dawn Men.

Yet ere a blow was struck or a missile shot by either side, there came an intervention, totally unforeseen by anyone, which saved me many a brave warrior and yet plunged me to the greatest depths of fury-filled despair.

Kneeling in the loam behind our shields, we faced the Piltdown men, every hand grasping a weapon. And suddenly there swept down from the cloud-obscured skies above and behind us, an aerial monster—a weird, terrifying creature, such as I never thought to exist on savage Venus. I saw but a shining flash descend from the heavens toward the foremost closely ranked Eoanthropi; as though pressed down by some mighty invisible hand, dozens of our wild antagonists were hurled aside or slammed to earth, and then the shining thing had struck. An immense gap appeared in their dense-packed ranks; high into the humid Venusian air were hurled dozens of shaggy Dawn Men, and hundreds of dead strewed that appalling pathway of grisly destruction.

Despair.

FACULTIES fled me again as I gazed stunned, uncomprehending, at the shining demon of the skies which was tossing afar the lifeless corpses of many of our panic--stricken foes.

Terror rode amuck among them when once they grasped the fact that some hellish entity was annihilating them—reducing them to but so many masses of torn, mangled, inanimate flesh. Then they screamed—hoarse, horror-filled man-screams—as they dispersed in fear-ridden pandemonium. In two minutes they had broken into so many individuals scattering in all directions, while still darting here and there from one small group of Dawn Men to another was the strange monster of the sky, throwing many a lacerated body into the air or to the ground, and the hundreds of inert corpses that marked its gory path gave mute yet eloquent testimony to its terrorizing might.

The feel of von Kressen's hand on my arm awoke me from the trance into which I had fallen. His face was white, his eyes gaped.

"Ken!" he whispered hoarsely, "Don't you see it—recognize it? God, man! *It's the Flying Dutchman!*"

A startled gasp shot from my lips. Wide as my eyes must have been, I think they went even wider when my paralyzed brain gripped the truth of his statement. The shining metallic hulk, the torpedo-shaped body now made discernible by distance and slower movements—what doubt could yet remain?

As we saw the machine halt, when the last of the vanquished Dawn Men disappeared from view, the Von and I stepped forward while the flyer headed slowly back in our direction. It was but a minute before the shell slowed to a stop a hundred yards above and in front of us. The Skipper and I ran forward, brandishing our rifles and yelling at the top of our lungs to attract the attention of the ship's occupant, who we knew must be Dr. Wilbur Throck.

Apparently misinterpreting our demeanor, the Karnan warriors gave vent to wild battle cries and straightway commenced shooting arrows at the metallic monster suspended above them.

Furiously I swung around toward them and roared out they they cease fire. But it appeared that my command was drowned in the volume of their own cries, and so I saw them but continue their warlike activities; while with greater fury and apprehension I noticed the two nearest catapults aiming explosive shells at the star-flyer. In a second the missiles were soaring through the air to their goal. One exploded on striking the shell of the ship, the other fifty feet from it.

Swearing like a pirate I sprang to the nearest catapult, where I brought my fist full into the mouth of the first man of the

crew, spinning him into a crumpled heap a dozen feet away.

Blind rage possessed me as I swung right and left, still bellowing at the top of my lung-power that the hostile conduct be halted. Eventually it dawned upon the surrounding warriors that for some reason I desired the cessation of the belligerent activities, and soon they quieted down, apparently utterly astonished at my demeanor. Turning toward the east again, I saw that the *Flying Dutchman* had vanished. Von Kressen, who stood near, then explained to me that at the beginning of the Karnans' fire the machine had backed away as though amazed at their warlike attitude, and then turned about and floated away.

Well, there was nothing further to be done about it, so after calling the troops to attention I proceeded to give them a sound rating and then commenced the homeward march to Karna, via the route we had followed on our southward expedition. On the march we picked up the men who still guarded the first few villages of the Eoanthropi; and what scattered bands of Dawn Men we occasionally encountered were speedily annihilated or dispersed.

THREE weeks after our departure from the cliffs of the Cave Princess, our column once more appeared under their scowling brows—a column depleted by some one thousand men. Three hundred wounded lay in as many litters, each borne on the shoulders of four men, so that our returning force had the appearance of a great medical company. Eight hundred men were unburdened by the litters but two hundred of these transported the catapults and our remaining supplies. Watchers on the cliffs had announced our approach as soon as we broke from the verges of the jungle, and now the entire remaining populace of Karna was swarming down to meet us.

Many a face was lighted by smiles as familiar figures were discerned in the trudging army of the Cave Princess, and many were the cries of joyful welcome that split the humid air; but many another face grew grave and anxious as the warriors it sought failed to appear. The returning fighters were immediately surrounded by milling circles of laughing, chatting women and children; but on the sides thronged, silent and grave, the wives and daughters and smaller children of many a stout-hearted Karnan warrior whose cheery masculine smile and parental solicitude would never again bring happiness and laughter into their lives.

As I marched past them into the village, I felt sorry for them, and also guilty, for I considered myself as being directly responsible for the deaths of those men. It was I who had led them to their ends; it was I who directed the campaign in which they lost their lives. And so it was not with the pleasantest of feelings that I regarded these women and children standing grave-faced and silent on either side of our marching throng. There was no weeping among them however; they took the blow with the habitual stoicism of their race, for violent death was too common among them to induce tears. Yet I knew that they held their mates and parents and brothers in perhaps higher esteem than do Terrestrials, therefore it was with deep and genuine sorrow that they slowly and with drawn faces turned back in silence toward the grey, beetling crags of Karna. But their heads were held high and their steps were firm and unfaltering, for each heart was filled with a great and just pride by the knowledge that their men had died nobly, unflinchingly, and in the service of their sacred Princess.

Once in the village, the litters were set upon the ground and their occupants propped up that they might look toward the cave that was the throneroom of their fair ruler, while the uninjured warriors were arranged in a great curved line that all might face the entrance to Deena's cave. Then the officers and we leaders stationed ourselves before the rank and file, facing likewise the crude portal of the throneroom.

A guard of twenty brawny youths who had just come into the state of warriorhood stood before and on either side of the

passageway's entrance, and when we had taken up our positions, its captain disappeared into the black cavity in the cliff. A moment later he emerged again, the guard fell back on either side and Deena, Cave Princess of Karna, stepped into view.

Immediately two thousand strong warspears were lifted on high and from two thousand loyal masculine throats thundered a mighty cry of greeting and of fealty.

"Hail, Princess! Our hearts, our hands, our spears; for the gods of Karna and for Princess Deena—*to the Death!"*

With the cessation of that ear-shattering roar, a silence as deep as the reaches of infinity descended upon the village for a long minute. It seemed that the very insects had been paralyzed into the silence by the volume of that thunderous greeting. Then the Princess raised aloft the light wand that was her sceptre, and in a low-dignified voice, quiet and yet reaching to the ears of even the most distant warriors with its bell-like clearness, acknowledged the greeting of her minions.

"Hail, warriors! The blessings of the gods rest forever with Karna and with you!"

She levelled the wand and passed it in a form of royal benediction over us, and as she did so we sank to our right knee as one man and bowed our heads in humble submission and allegiance to her regal mandates.

Simple, brief, and to the point—that was the whole ceremony, as are all ceremonies of this people, with the possible exception of those accompanying the entry into warriorhood.

Eating and dancing composed the greater part of the festivities that evening—festivities which were dampened somewhat, however, by the absence of a thousand brave, strong, loyal fighting men.

The next morning the greater number of warriors began the return journeys to their various villages, and ere they left I expressed my hearty thanks for the splendid service they had rendered me, and assured them that I would try to repay them if it lay in my power to do so. Then, after my simple speech, all those grim fighters at my suggestion faced toward the southwest and raised aloft their spears in a final tribute to those who lay there so mutely under the cloud-laden Venusian sky—a simple ceremony in which von Kressen and I participated with raised rifles, while the women of the village turned with bowed heads in the same direction.

CHAPTER XVI

The Crisis

DAYS passed. The Venusian summer had again descended upon the Karnan plateau; the orange sun of the savage planet bathed our locality in its soft light, and certain flowers that grew only during these brief periods of sunshine filled the damp air with their fragrance. Most of the wounded warriors had recuperated sufficiently to be up and moving, and among them was Manda the Fleet One. Parri's knife, though narrowly missing the lung had not injured any of the vital organs, and with the assistance of the young Witch Doctor and his own powerful constitution, the youthful chieftain had soon regained his health and strength.

Frequently von Kressen and I were to be found in the cavern that sheltered Raoul Parri—the same cave which had been occupied by the Von when we had first come to the village—hovering solicitously over the seriously-injured man. My bullet had seared a broad band across his forehead, tearing away the skin and grazing the skull beneath, so that the worn, splintered bone gaped hideously from between lips of frayed, friction-burnt flesh. Fever had attacked the man, as a matter of course, and ever since the day of the great battle he had been suspended perilously over the yawning maw of Death, held to Life only by a weak, slender thread that seemed to be growing thinner and thinner with the passing of time, so that little hope for his recovery was justified.

"But he's *got* to pull through," I vociferated almost hysterically to the Von, "I've *got* to know how it comes that he was fighting on the side of that Piltdown crew against what he could easily perceive to be humans like himself! I don't get that at

all. I guess the Danes are making glue again."

The Skipper nodded and swore under his breath. "If those silly gumps hadn't scared Throck away with their damned catapults, Parri would be O. K. again by this time. As it is, this bunch of heathens stands a darn poor chance of pulling him through. Darn it! Why in hell *did* they have to start shooting like a bunch of nuts?"

As the crisis approached, von Kressen and I spent whole nights squatting beside the inert, unconscious sufferer, doing what we could to allay the tortures that racked his body, scarcely breathing as we looked upon his helpless form. And at length the dreaded hour arrived that would decide the fate of our old friend. He lay motionless, mute, with closed eyes and scarcely heaving chest. Extending my right hand to his wrist, and testing the temperature of his cheek with the fingers of my left, I turned toward von Kressen, sitting like a carved image of marble beside me, hardly discernible in the gloom that shrouded the cavern like a tenuous haze or pall of Death.

"I'm afraid," I whispered in a low voice that seemed to waken those sinister, clinging shadows into ominous, flickering demons from the Great Beyond, "I'm afraid that he's not going to pull through. What to do?"

A faint gasp returned from my companion as he rose silent as a ghost and began noiselessly pacing the cave in quick, long strides, looking like a dim, ghastly spectre against that weird background. Presently he stopped beside me and sank once more to his haunches.

"Listen!" he whispered eagerly, "You gave me an idea! Why not try suggestion? You said it looks as if he's not going to pull through. Well, it occurred to me just now that in a certain psychology book I've read, the writer stated that the subconscious mind doesn't get the word 'not'. Hence, Parri's subconscious got the suggestion, 'I'm afraid he's going to pull through'. I rather think psychology is our last recourse, so what say we try it?"

"Jake here. Try *anything!*"

And forthwith we fell to work. Kneeling beside the patient we whispered repeatedly into his ears such phrases as, "You'll pull out all right, Parri. You are getting better right along, old top. Keep it up! You're in perfect health, Parri, old man—perfect health."

For a long time we kept it up and at last retired to our own caverns to sleep, fagged out as we were by the many previous days and nights of unceasing vigil at the bedside if a mat of leaves covered with a bearskin may be termed a bed) of the French astronomer.

Whether or not it was our attempt at suggestion that turned the tide in the favor of the sick man, I do not know, but the fact remains that when next we visited him, a day later, he was resting quietly and was undoubtedly on the road to health again.

FOUR days later he came back to brief periods of consciousness, and on one of these occasions von Kressen and I knelt beside his mat. As his eyes flickered open he gazed at us dully for a long minute, then the glow of dawning comprehension concerning his whereabouts grew in them. He made a weak movement as if to crawl away from the two bearded, naked savages beside him. I spoke in English, extending my hand as I did so.

"Hello, Raoul, old top. How are you feeling this morning?"

Surprise shot into his own unshaven face as he regarded me, then he gasped in a weak voice.

"God! You speak English? How do you know that tongue. Who are you?

"Careful there, old boy. Take it easy, don't talk too much at a time. Don't you know me, Parri, old chap?"

If amazement had been written on his face before, it was nothing to the expression that deepened on his countenance as with a startled gasp of comprehension he lunged toward us.

"*Marx!* Kennie, *Mon Vieux!*" he almost sobbed, clinging to my bare shoulders and peering eagerly, hopefully into my face, "I didn't recognize you at first. Why the foliage?" as his eyes roved to my com-

panion another look of astonishment swept over his face and he extended one hand to von Kressen.

"Hullo, Von!" he murmured, "Gee—." He paused, then went on in his weak voice, "Beards. Everybody wearing beards. New styles? Say—" he demanded suddenly, "Throck! Where's Throck?"

"Listen, Parri old chum," I rejoined, easing him back upon his mat, "I'll tell you all about it later. You're weak now—sick. Better lie back and rest."

"*Mai Oui.* Gess I'm sick. Feel weak. Dizzy already," he replied, and closing his eyes, promptly fell asleep.

Two weeks had elapsed. Raoul Parri sat outside the caverns of the dead Nogas, whose daughters had nursed the Frenchman as they had nursed von Kressen, and beside him squatted Ludwig von Kressen and Kenneth Marx, barbarian chieftains in the tribe of Karna.

"Well, Raoul," I began, leaning against the cliff, "do you think you can tell us everything that happened to you since you were carried off at the water-hole down by the ocean? Who attacked you? How come you were fighting against us on the side of the Piltdown bunch, who were evidently your friends?"

Parri regarded me with a puzzled stare. "Fighting against you?" he murmured, "Piltdown bunch? What do you mean?"

It was my turn to stare at him in wonder.

"Tell us everything you can remember from the time we landed on this planet," prompted the Von.

"Well—"the astronomer reflected for a moment, then continued. "I remember that we came down on a large grey ocean about quarter to four, afternoon of June eighth. Then we flew in a westerly direction for about a thousand miles after we'd seen a plesiosaur and a pterodactyl, and finally landed on a little mesa about half a mile from the seashore. Marx and I made a trip of exploration, walking around the mesa. Then Throck and Marx went out to photograph some Venusian animals, and Marx came back with Throck over his shoulder. Throck had been wounded by a ragged rock shot from a sling, most likely. We put Throck in bed for the next three days stuck inside the shell for the most part, doing nothing in particular. Then I went out to get some water—" abruptly he stopped.

"Yes, Parri," I prompted excitedly, "That's what we want to know—what happened to you when you went to get the water."

"I came to the place where you'd shot the Venusian crocodile, and was holding the containers under the waterfall, when—" a pause—"when I heard a soft sound that made me sense danger. So I swung around —"again a pause—"and there in the jungle stands a whole tribe of the ugliest fellows you ever saw. Piltdown men—a whole bunch. Seven or eight of 'em, I guess." Another pause ensued, then our friend continued in his careless, slangy manner, "Well, the whole damn army of 'em came rushing up to me before I could do any shooting, but I bounced the butt of my rifle off the head of one and he came down like a ton of bricks, but he was right up again. Then the whole tribe of 'em grabbed me and starts slamming the insides from me. Then—" a period of silence again descended, "one of 'em must have clubbed me with a lead-filled billy, because—I remember a kind of pyrotechnic blowout against a black background, and that's all."

Loss of Memory

AS Parri ceased speaking von Kressen broke in, "You say you beaned one of the enterprising crew with the stock of your rifle, but you didn't have time to shoot. Explain please. You naturally hold a rifle with one hand pretty close to the trigger. In order to use the rifle as a club you turned it around so the muzzle was in your hand. Gosh, in the time required to do that you could have bumped off the whole gang."

"I didn't turn the rifle around. When I got to the waterfall I leaned it against the cliff with the muzzle pointing up, and when I grabbed it as I saw the Welcome Committee come toward me, I naturally grabbed

the muzzle first and swung up the stock to that one gink's head."

"Why didn't you use your revolver?" asked the Von.

"Didn't have any along—nor any cutlery."

"And what happened after you came to?" This from me.

"I have dim, fleeting recollections of being carried through the jungle by two husky Piltdowners, the rest of the tribe hiking along beside me. Most likely I had fever, because these impressions lasted only a few seconds, and sometimes they show day scenes and sometimes night scenes. They must have extended over a period of several days."

"Yes. And then—? What else do you remember?"

"The next thing I remember is opening my eyes in this cave behind us, with you and the Von sitting beside me."

Von Kressen and I stared at him in astonishment.

"Then you don't know the time that elapsed from the occasion of your capture up to the day of waking in that cave?" asked the Von, incredulously.

"I know it must have been a number of days—perhaps even a couple of weeks, because you two are dressed like these savages here, and so am I in a way. Then, the three of us have heavy beards—in fact, if I may judge from the beards, the elapsed time must have been a couple of months."

"Then," said I, "you have no recollection of leading five thousand Piltdown men against me and the Von about four weeks ago? You don't remember how you got that wound on your forehead? You don't recall the big battle between your forces and mine, where we finally licked your mob with the help of Throck—where you stabbed one of my best friends, and I burned your skull with a regulation .30-.30?"

"Why—no—" replied Parri wonderingly, again regarding us with that puzzled stare.

"Then, Parri old man, you've suffered loss of memory. Apparently the fever you contracted after being wounded at the waterhole, deprived you of your memory and you lived for seven or eight months among the Piltdown men; rose to a position of some eminence among them; and later combined five thousand of them to fight my army of Cro-Magnons when I led them out to expell the Dawn Men from our territory," I declared, and forthwith the Skipper and I related our own experiences from the day we had set out to find him.

"And you think," said Parri, after we had finished, "that there is little chance of Throck's ever finding us again? So we're doomed to spend the rest of our days on Venus, are we?"

"That's just about the way it looks," I agreed, as von Kressen and I turned back to our caverns.

CHAPTER XVII

A Savage Encounter

MONTHS had passed. Raoul Parri was a member of the Cro-Magnon tribe of Karna; a naked savage ornamented by feathered headgear, amulets of colored birds' down, necklaces of dyed teeth, and painted with berry juices. Armed with the primitive weapons of the cave men of Venus, garbed in their loin-skin and deer robe, jesting with them in their own tongue, he looked as much a barbarian as the brawny huntsmen beside him.

The Skipper and I led the company, numbering six men, including us Terrrestrials, and Deena, who was chatting amiably with the Von and me. Torag's first attempted abduction of her had induced her not to venture afield without an adequate guard, which always comprised the Von, Parri, Manda, any two other warriors she might select, and myself.

More often than not we returned to the cliffs empty-handed, but this made little enough difference to us. Those hours in the forest nevertheless permitted exercise and practice in weapons, and there was not a single occasion in which some adventure did not befall. As a rule these occurrences were not of a nature that jeopardized the lives of the party, though there were times when we were exposed to the menaces of the forest denizens. For instance,

on one occasion we had been charged by a dinotherium, but had eluded the stupid beast's rush by prudently parting into two divisions, opening a lane down which the jungle destroyer blundered his way. The dinotherium, even among the titanic, fiendish monsters that harass the face of the yellow planet, is a monarch among monarchs—a great, savage engine of destruction that brooks no obstacle weighing less than fifty tons. Built on the lines of the Earthly rhinocerus, but of vastly greater proportions—I have seen a specimen standing twenty feet high at the shoulder—its great head has six horns that curve upward and outward at the sides, forming a cradle in which a full-grown man could lie with no discomfort. The slate-grey armor plates that ensheath its body are over an inch thick—two and three inches quite often—and utterly impervious to even the heaviest of our regulation army bullets.

On another occasion we had witnessed a sight, so appalling in its savage ferocity that even the stoic Karnans gazed with blanched faces, gasps of surprise, and open-mouthed awe at the grim, gory chapter of jungle life being enacted before them. Two monstrous sabre-toothed tigers, in comparison to which the one I had killed so long ago was as a mere Terrestrial tabby-cat, rended and tore each other over a freshly-killed ground sloth. Whereas the individual the Von and I had encountered at the cliffs where the Karnans found us measured but four feet at the shoulder, the gigantic demons that battled before us on this occasion towered fully *sixteen feet* at the shoulder. From the withers to the rump each one extended twenty feet; a twenty foot tail the thickness of a strong man's upper arm lashed the plants about; and a monstrous head four feet in diameter was connected to the body by a two-foot neck. Each of the combatants was armed with the two great sabre-teeth, each about three feet long, and with shorter fangs measuring from three inches to a foot in length. The beasts were covered with the usual light tan pelt, speckled and striped with deeper tan.

Never, as long as I live, will I forget that wild scene, that demoniac combat, that was enacted under the swaying, soughing fern trees of the savage wilderness—a grim reminder of the jungle's might and its terrible secrets. Roaring and screaming till the very trees quivered as though in terror, ripping and trampling the tortured earth with their enormous clawed feet, the great cats (cats—weighing fifteen tons—ye gods!) sprang and tore each other like veritable incarnations of unreasoning Hate—Hate that knows no law save that of its own selfish satisfaction, that admits no obstructions, and cares naught for consequences.

The life blood of each was spattered afar, so that even we, who were perched high up on the lofty limb of a substantial tree, were flecked with its crimson stain, while the soil underneath the fighters was simply drenched with their gore. The nerve-shattering clash of the monstrous sabre-teeth; the blood-freezing noises that came from the great brutes; the savage maneuvers they made to rend each other's throats to shreds—is there any way of describing them? Not for me. Were I to try to do justice to that fierce encounter, my account of it would be about as adequate as that of the average six-year old boy, even had I the vocabulary of a Shakespeare—which I have not. O tongue! O pen! Where lie your powers?

IT is best that I abstain from attempting a narration of that terrible conflict, for it is useless. Not even the sensations that rioted within me fall under the power of my pen. Suffice it therefore to say that I was no longer master of my emotions; fear, terror, savage glee at the sight of fresh-spilled blood, utter abhorrence for the grisly act below me, and over all a vast awe for those hell-possessed titans—all ran amuck in my breast, and then as never before I realized the puny insignificance of human physical endeavors when compared to those of beasts as these. In watching that battle of giants, I seemed to shrink in size till I was no larger than a little ant, crawling in terrified confusion from the scene of the combat.

Shaking in every limb, all of us stared down in horrified fascination as the malignant titans beneath reared and tossed and charged and fell, rolling over and over, springing up again, screaming, moaning, bellowing, slashing with all feet, red maws distended, evil little eyes flashing hatred through narrow slits of wrinkled, fur-clad flesh. And all the time they were ripping each other to raw- bleeding shreds. And at last one got the other's throat between its mighty fangs—pulled savagely, and tore the jugular vein out.

But the second gorgon had doubled up under the first and drawn up its hind legs, and as its own life was quenched, its powerful legs swept into the white-haired belly of the other bruite, completely disembowelling it. Both great beasts sank limply to the ground, one still screaming in pain and rage, and the muscles of both still twitching as they glared into each other's wicked, bloodshot eyes, till at last Death, the Ultimate Victor, stilled the glow of hate within those untamed orbs, quieted the twitchings of the muscles, and gathered both brutes into his realm.

And round about sighed and whispered the jungle—the vast, mysterious, cruel jungle—while above scowled the sullen, sunless Venusian skies, to whom such scenes were commonplace. They were fit companions—the merciless green wilderness and the brooding, pitiless leaden skies. They shared each other's secrets; long before animal life appeared on the planet they had been companions—the heavens and the jungle—and long after animal life has vanished from the planet, there will still be the heavens and the jungle.

Such occurrences as the above were not often met, it is true, but on this day as our party stepped carefully through the rank undergrowth, we were again destined to meet with a momentous adventure.

About a mile from the cliffs we came to a rocky escarpment rearing itself three hundred feet up from the level of a small field surrounding it. In these rocks, we knew, lived flocks of the Venusian mountain deer, closely resembling the Earthly chamois. With the intention of bagging one I warily neared the cliff, eyes scanning its precipitous flanks for a means of mounting the wall. At a hundred yards I spied a young buck standing sentinel on a little eminence which he had just appropriated, and immediately upon spying me he emitted a peculiar blast that warned the herd of danger.

Raising my rifle I aimed and fired, saw the deer jerk suddenly and then lunge forward dead. Hastening to the wall I found, to my delight, a narrow but easily-negotiable trail leading toward the top of the natural rampart. In ten minutes I was stooping over my buck, the rest of the herd having long since vanished into the tortuous mazes of that rocky stronghold.

As I bent over my kill I was brought looking about by the sound of great flapping wings, apparently but a few feet above me. I caught a fleeting glimpse of a monstrous shadow shooting over the pitted top of the cliff, then something struck me a violent blow in the middle of the back.

Into the Air!

EXPECTING to be thrown face down on the rock, I extended my hands to ease my fall. To my unutterable astonishment, however, I did not drop, but scraped lightly along for a few feet and presently rose into the air in a long slant. Throwing my astonished gaze upward I saw above me the head, breast, and wings of a giant eagle. It was not a bird resembling any of the prehistoric monsters of the Earth, but a new form entirely. Its head was crowned with upstanding feathers as in some species of parroquets, and its wing-spread measured some forty feet. Its breast was a speckled grey-brown, the under skies of the wings a dirty grey, its head and neck brown, while the upstanding feathers on the top of its head were white. Its body, I subsequently learned, was about twelve feet long.

Inasmuch as the bird had not dug its claws into my back, I assumed that it had grasped my rifle which was held to my body by a broad strap crossing my chest diagonally from the left shoulder to the right hip. In order that I might use both

hands to facilitate my ascent of the rocky barrier, I had slung the rifle to my back following my killing of the mountain deer. This hypothesis was somewhat substantiated by the unusual tension and pressure of the gun's strap across my chest.

It must not be supposed that I spent my time in thus coolly appraising my abductor. Quite the contrary, I had been already carried a hundred feet over the rocky, chasmed maze ere I sufficiently overcame my horror-tinged astonishment to look up and see what occasioned my sudden levitation. However, once having discovered the bird, all other thoughts were dispelled by this one; and not until I had seen all there was to see, did I return my gaze to the landscape beneath.

During that time the great eagle had borne me fully another fifty feet into the dense, humid Venusian air, and now I was suspended between heaven and earth in the claws of this fiendish monster of the air, moving swiftly over the green plain beneath toward an unknown destination. My situation was anything but pleasant; for though it was rather nice to have an elevated view of the surrounding plain, four hundred and fifty feet above its level, still I dreaded the possibility of the bird's hold weakening.

On the other hand, if its hold on my gun did not weaken, it was but logical to assume that at the end of the aerial journey I would find myself in some great cavity with two or three young birds—each about four feet long—who would fall on me with wide-open beaks and use me as a means of satiating their hunger. I was in something of a quandary as to which fate was the more desirable, and finally selected the former; but admitted regretfully that as like as not, the latter would befall me.

However, I was heartened by the sight of a pteranodon approaching my captor at full speed with the apparent intention of contesting his possession of me, and I reflected cheerfully that if an aerial encounter took place I would be promptly dropped by the eagle and dashed to death on the loam beneath. So consoling was the thought that were I by nature of a less pessimistic disposition, I should no doubt have yielded to an inclination to sing.

My hopes were soon shattered, though, by seeing the pteranodon suddenly swerve off to one side while the eagle, abruptly voicing a low, harsh cry, swung to the left and commenced to circle. But as my thoughts returned to their former gloomy trend I noticed my feathered possessor dropping in a long, curving slant toward the ground, its path tending more and more to the left.

What happened? I wondered, but to no avail. But Hope again surged high when I saw that the bird's enormous circular descent was leading it back to that side of the stony escarpment on which my fellow hunters were. If they could but place a few arrows into the eagle when it had brought me pretty close to the ground—.

Nearer and nearer to the soil descended the great, winged monster, making a few attempts to rise, but always forced down again for some unaccountable reason. And at length, to my joy-filled amazement, my feet scraped the ground but a few hundred yards from the spot where I had shot the mountain deer. Deena and one of the men remained at the spot; two others were hanging on the cliff wall, and two others stood on the brink of the natural rampart.

I called aloud to them. One of the warriors on the cliff top raised a glinting weapon; a flash of fire shot from its muzzle; the bird carrying me reeled; then came the sound of the report, and the eagle dragged me in a bumpy fashion over the plain, thoroughly bruising and skinning me in a dozen places, finally releasing me to drop in a crumpled heap upon the soil. A few yards further on the bird itself sank lifeless to the ground, muscular action causing the wings to beat about for some minutes.

Promptly upon being freed I rose and raced toward the Cave Princess, while from the cliff above the Karnan warriors swarmed down to join us. Barely had the entire party gathered again, Deena looking at me in mingled anxiety and relief, and everyone pumping me with questions pertaining to my late experience, when von Kressen gripped my arm and pointed into the air toward the spot where the dead eagle lay.

As I followed his gaze a deep silence fell upon us; for there, floating sedately in the damp atmosphere of the yellow planet, was the metal monster of the air that we had seen several weeks before—the *Flying Dutchman.*

CHAPTER XVIII

Reunion!

SUSPENDED fifty feet above the ground the forward-end propulsion window staring at us like the eye of a cyclops, the flyer hung motionless in the air, evidently awaiting a move on our part.

Requesting the Karnans to stay behind, von Kressen, Parri, and I strode toward the aerial monster, the German and I with our rifles aloft to prove our identities to the ship's occupant. As we approached the shell commenced sinking to the ground, and when we stopped it settled gently to the soil ten feet from us. A period of waiting elapsed; then the door of the flyer opened and there stepped out before us Dr. Wilbur Hollisway Throck, late of London, New York, Washington, and a little village in eastern Prussia. In appearance he was pretty much the same as when we had left him, though several red welts crisscrossing his right cheek and a jagged scar traversing his face from the middle of his forehead to the outer corner of his left eye gave grim proof that our English companion had also been plunged into hazardous vicissitudes since we had last seen him on the little plateau by the sea.

He was regarding us in a curious fashion —as though he felt fairly confident that we were indeed his long-lost companions, yet entertaining also the possibility that we were Venusians who had killed his fellow Earth-men and appropriated their weapons. But he was soon to be put at ease.

"Hello Throck, old scout!" I exclaimed, advancing with outstretched hand, "Then it was you who forced that bird down to the ground?"

The physician's face lighted as with wide-flung arms he rushed toward us.

"Hang it all—the boys!" he cried. "Well, I'm hanged! Hang me if I'm not hanged! Hang it all anyhow!"

Promptly my companions and I pounced on him and wrung his hand, babbling incoherently all the while, demanding how he had divined our whereabouts, and all the time dancing around like a bunch of five-year-olds doing the "Ring around the rosey." I know it was a silly demonstration for a mob of staid scientists to pull off, but —Well, none of us were very sorry to see Throck again.

"How'd you find us, Will? How'd you know where we were?" asked Parri, when he had once gained control of our enthusiasm.

"Why, hang it all, I used to fly around in the Von's go-devil here, looking for you chappies, y' know; and a number of months ago I came to a place where a couple of armies—all wild beggars, y' understand—were brawling something fierce. So hang it all, y' see I took the side of the more human-looking blighters and rammed the *Flying Dutchman* into the other fellows. That settled 'em. Then I turned back to the crowd I'd helped out, and hang it all, the blooming idiots started shooting at me with explosive shells. There were two chappies though, who were coming toward me with a couple of rifles in the air.

"Well, y' see, hang it all, their explosive shells made me hike. But I said to myself, 'Hang it all, where there's a rifle there must be a von Kressen or a Kenneth Marx or a Raoul Parri.' So I kept cruising around this section and today I came just in time to save one of you blighters—which one was it? You, Ken?—from being carried off by this eagle. So here we are, hang it all anyhow."

Presently von Kressen bethought himself of the Karnans, who were staring at our proceedings in unmitigated astonishment, and signalled them to approach. When they had come up he restored order in place of our wild caperings, and immediately explained to Deena and the Karnan warriors that this was the "great bird" that had brought us to this continent; and that Throck was the fourth member of the original party. Then in English he told Throck what had occurred since we had left him on the little

mesa by the sea, and wound up by introducing Deena as our sovereign and the Karnan huntsmen as our fellow-citizens of her nation.

DURING the Skipper's review of our vicissitudes the party had repaired to the *Flying Dutchman*. It looked just as it had when I had last seen it. I led Deena and Manda about the ship, while Parri did the same with the other two warriors, showing them its many wonders, and revealing at last that we Earth-men were not of their world, but from a beautiful green star that shone far above the veiling clouds of their savage planet. This necessarily entailed a lecture embodying the essentials of astronomy and something of mechanics. With the aid of the books and charts in the ship I managed to convey the rudimentary principals of the former science to the minds of my auditors, who sat about with utter amazement written on their handsome features.

I have never been a lecturer, even apropos of my profession as an archaeologist; so it was with a most peculiar sensation that I harangued my spellbound listeners on the subject of astronomy. I felt at once flattered and very wise to be able to thus impart knowledge to my barbarian friends, and yet somewhat self-conscious of my oratory shortcomings. But it seemed that my speech was impinging well upon the minds of my hearers, for they regarded me as though I were some sort of demigod to whom, in fact, the stars and planets I spoke about owed their existence.

Thus a number of hours passed, and the sun crept to the position of mid-afternoon. Von Kressen asked Deena and the other Karnans if they would like to see the multitudinous stars that gleamed so beautifully above the cloud-curtain of the Venusian atmosphere, and upon receiving their assent he closed the door of the ship. Everyone grasped something to hold on to, and as the Skipper touched a few buttons on the instrument board the car rose gently into the humid air and sped eastward. In a few minutes the dense, swirling clouds had embraced us, occluding the ground beneath and revealing naught but a tumbling grey chaos through which darted the occasional vague, shadowy shape of some untamed denizen of the skies.

Then suddenly we burst through the last blanket of clouds and shot into the stygian void of infinite space. Gasps of amazement broke from the Venusians as they beheld the utter blackness of the limitless stretches of space, bespangled with thousands upon thousands of the multi-hued jewels of infinity. And close beside the sun, partly obscured by the great luminary's corona, blazed a wondrous eye of green—the Earth—the star from which I came!

I pointed it out to Deena; told her of the wonders of its civilization, of its mighty seas and fair green lands, of its beautiful azure sky, its great cities, its wondrous parks and monstrous buildings.

"Oh," she breathed, "How beautiful it all is! And in your land, Kenneth, one can always see these—stars?" She hesitated a bit at the last word and then spoke it in English, for the Karnans, who never see the stars have no equivalent for the term.

"Only at night," I responded, and told her also of the beautiful moon that bathes our planet with its serene effulgence.

After half an hour we turned back once more and again plunged through the cloud-layers, coming to rest presently above a little mesa half a mile inland from the sea.

"Know this place, Marx?" asked the Von, and upon staring down at the tiny plateau it dawned on me that this was where we had first landed upon reaching Venus—this was the place upon which I had trod when first my foot touched the soil of the savage planet.

Then the Von, sailing almost due west for a distance of some fifty miles, eventually brought us again to rest over the central clearing of Karna, the cave-village of Deena. To preclude throwing the Karnans into a panic should we land in the village, the Skipper floated us southward about a mile and then brought the ship to rest in a tiny field embraced round-about by the grim Venusian forest monarchs that tossed their soughing, swaying heads far up into the rain-laden skies.

Here we disembarked, and leaving Throck within the *Flying Dutchman*, the rest of us returned silent and thoughtful to the Karnan caverns. I cannot describe the strange emotions that filled me—struggling, surging, rioting sentiments—but I was torn between the conflicting desires to return once more to my native planet, and the knowledge that I had avowed myself eternally a Karnan warrior, with naught so dear to me as the welfare and the happiness of these naked Cro-Magnons with whom I had cast my lot. Then there was Deena—the prospect of leaving her loomed suddenly before me—and decided me. I would remain.

Von Kressen and Parri, it seemed, were having as hard a struggle as I had had—a harder one perhaps, for they had little indeed to help them make the decision.

Yet when we reached the village, von Kressen turned to me. "I'm going to stay here, Ken. Made my promise—can't go back on it. What you going to do?"

"I stick. I guess the Princess and her gang need us. How about you, Parri?"

"If you two stay, I stay. Guess Throck will have to pilot the old boat back to Earth himself."

The Return

UPON arriving at the village, Deena requested us Earth-men to come to her throne-cavern, and once we were assembled there, she launched into the subject that had been troubling us all since Throck had found us in the grassy plain by the cliff where I had shot the chamois. At her signal we seated ourselves on the floor while she appropriated the crude wooden throne.

"Kenneth, Ludwig, Raoul," she began, "the great hollow flying monster that today took us all so high up into the air—that is the bird that brought you to the land of Karna?"

"It is, Princess," replied I.

"Can that monster take you back to the green—star—from which you came?"

A sudden glint shot into the eyes of the two other men.

"It could, Princess Deena, if it were guided there."

She was silent a moment.

Then she said, "Do you wish to return to your own land, my warriors? If you do, I will give you permission."

We stared at her thunderstruck.

"You mean that, Princess Deena?" queried Parri eagerly, leaning forward toward her.

"I mean it, Raoul."

The astronomer looked at the Skipper and me as though asking our advice, but we ourselves were in something of a quandary, from which I, however, soon emerged with my former decision.

"If it will not be considered that I am breaking my vows of warriorhood," said the German physicist slowly, "I *would* like to see the face of my own planet once more."

"You have rendered us the services of a lifetime while you have been a Karnan, Ludwig, and it is only just that we should hereafter permit you to go whither you please and when you wish."

"Then, Princess Deena, with your gracious permission I withdraw from the tribe of Karna and will return to my native land. But should my services be yet required, please tell me, and I shall happily continue to remain your subject until I may be spared."

"Karna is well established now, Ludwig, thanks to you and to Kenneth. You may depart whenever you like, but should you ever return, the caverns of my people joyfully await you."

Parri and von Kressen bowed after the Terrestrial manner. The Cave Princess turned to me.

"And you, Kenneth?" she said in a soft, low voice—tinged, it appeared to me, with a tiny note of sadness or anxiety.

"I remain, Princess," I responded calmly.

Was it a tear that glistened briefly in her blue-grey eyes at my answer? Was it a smile of happiness that flitted for a split second over her earnest features?

"You do not wish to go back—to your world of great buildings and beautiful lands and moonlight nights?" she asked, attempting—and failing—to make her surprise appear as if she were personally disinterested.

I hesitated. It wasn't that I didn't wish to go, but—

"I remain, Princess," I replied again.

From the tail of my eye I observed that the two men were regarding me quizzically, and I thought I detected a hint of a smile on the face of each. And suddenly I felt nervous—embarrassed in fact, for no reason I could see—and felt a flush creeping up into my cheek from my throat. I found myself earnestly wishing they would betake themselves from the cave, and I started fidgeting around something fierce.

Maybe it was telepathy. Maybe it was my sudden nervousness. At any rate, without even asking the Princess' permission, the two scientists rose quietly and strode from the cavern, nor did either Deena or I say a word to stop them.

SILENCE reigned for a long minute after they had gone, then Deena again asked, earnestly

"You do not wish to return to your world, Kenneth? Why not?"

"I remain, Princess. I do not wish to go back—alone."

"But you will not be alone!" Ludwig, Raoul, Wilbur—all will be with you, Kenneth," she exclaimed, trying to appear as though she hadn't caught the drift of my preceding statement.

"Now listen, Deena," said I, rising to my feet before her. "You know what I mean. I cannot go back to my world without you —therefore I remain."

"And if I should go along, Kenneth? Then would you return?"

"If you could get away from here, Deena," I exclaimed enthusiastically, "then I would return."

She spent a moment in earnest reflection, then murmured softly, "I shall have to call a Council of the Chieftains, but I think it can be arranged."

Within the metal hull of the *Flying Dutchman* were five people: Ludwig von Kresseen, German astronomer and physicist; Raoul Parri, French astronomer; Wilbur H. Throck, British physician and bacteriologist; Deena, Cave Princess of Venus; and I, Kenneth Marx, American explorer and archaeologist.

The ship lay on the little mesa that had first witnessed our alighting on this grim young world, and on the top of the little plateau stood five hundred warriors and chieftains of the tribe of Karna, assembled to pay final homage to their fair former ruler and to the Earth-men who had lifted their clan to the pinnacle of Venusian mankind.

At the door of the flyer stood Sagor, new Chief of Karna, who had been elected to that station by the Council of Chieftains. "The gods of Karna and the spirits of her warriors be always with you, Deena; and with your mate and his companions. And should you ever come back to us, know that the throne of Karna and the hearts of her people await you."

The young Witch Doctor who had taken the place of Nogas, and who had performed the wedding ceremony for Deena and me, raised his hands in a mute benediction. Then he, Sagor, and Manda, who stood at the new Chief's right hand, stepped back from the door; a thunderous salute broke from the throats of the assembled warriors: "Farewell, Princess! Our hearts, our hands, our spears; for the gods of Karna and your memory—*to the Death!*"

The door clanged shut. A moment of tense silence, then some buttons clicked, and we shot up into the dank air of the planet Venus. A moment of tumbling grey chaos —then out into the maw of infinity.

A hundred and fifty-nine million miles distant shone the Earth—the star of my nativity. Our course brought us far within the orbit of Mercury, for the Earth was almost due on the other side of the sun. Traveling at three thousand miles a second, we reached our planet in fifteen hours, twenty-nine minutes, and thirteen seconds, landing at Ludwig von Kressen's East-Prussian farm at 12:15 P. M., June 8th, 2005.

Deena and I now live in my little cottage outside Washington. Ludwig von Kressen and Raoul Parri have built an observatory in the Rockies. Wilbur Throck has a

British Government medical post in Central Africa.

My wife and I are happy here, in these serene, peaceful surroundings and in the company of our many charming friends. Yet there are time when we live again the adventurous lives of the Venusians, and yearn for the green jungles, the terrific storms, and the untamed denizens of savage Venus. The very danger of those grim forest fascinates one so that it sometimes seems hard to give them up. Many an evening I stare up at the golden eye of the Evening Star, picturing in my mind the many grim dramas that are even then being enacted on its surface, and wondering if my own adventure was really true or whether it was but a dream.

But when I doubt, I have but to turn to the silent figure that stands motionless beside me, staring likewise up into the star-flecked heavens, and there I have my answer. For certainly the best and surest reminder of the many eventful days we spent on that grim planet is Mrs. Kenneth Marx —Cave Princess of Venus.

THE END.

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The House in the Clouds

(*Continued from page 523*)

seemed more and more like a dream. As I was almost asleep our landing gear struck ground and we taxied over the field and stopped in front of the hangar. Slowly I crawled out and stretched my weary limbs.

Banston was still sitting in his cockpit, staring out into space. He sat like this for a long time until the mechanic came over and asked him for instructions. Then he slowly crawled over the edge and down to the ground. He joined me and we walked over towards his car. As we were almost there someone called: "Oh! Banston! I say, did you find it today?"

We looked at each other without a word. I cannot express what we felt.

After a while we got into the car and quickly drove away.

THE END

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that Mr. Wesley Arnold writes about will eventually take place. Mars is dying quickly, the Earth is dying slowly, but nevertheless dying. But Venus is a youthful planet, still to attain maturity. Both Earth and Mars cast longing eyes on this luscious, new world. Who will have it in the final struggle?

AND OTHER STORIES

Lords of the Deep

(*Continued from Page* 563)

lease the torrent of lava on the foe rather than be taken alive. Such a deed would demolish the great cavern, and perhaps the entire island above it. So desperate was the conflict that none could be spared to watch the pool for my coming. Indeed they were of the opinion that I, too, was lost in the ocean deep. She alone had faith in my return, and so she had crept away from the battle scene and had managed with feeble strength to start the machinery that operated the drainage system.

But I did not wait for further news. Rather I rushed, followed by my command, madly down the secret passage. In my anxiety, the distance seemed a mile or more, and my feet weighted with lead. But really it was but a few minutes before I reached the exit. One glance told me that I was in the nick of time. Somewhat daunted by the threat of the king to turn the burning flow of lava down upon their heads, the horde of victorious warriors of the priest-clan hesitated to press their advantage and administer the finishing blow. In fact they had withdrawn to a short distance to plan how to capture the king by some piece of stratagem. That gave me the very opportunity I craved. Under cover of the withdrawal, I maneuvered my little force of seamen to a position to one side of the passage and had them set up the rapid-firing guns behind a strong natural barricade of stones. Then I ran swiftly towards the king's party to bid them fly to the cove.

Astonished as they were at my sudden appearance, they still had enough reason left to follow my commands without parley. All of this program occupied but a few seconds. Of course the enemy instantly perceived the flight and with exultant shouts rushed pellmell in pursuit. No doubt they imagined that the king was making a last desperate effort to escape. It was nip and tuck for a moment, and only the desire of the foemen to capture the King alive prevented his death by a flight of deadly arrows. But luck was on our side so that the last of the king's forces, including two of the seamen and John and Silas, all badly wounded, were safely within the shelter of the passage before the first of the attacking forces arrived before the entrance. On they came, in full confidence of a speedy revenge. But we met them with such a withering blast of fire directed by the concealed seamen, that we must have convinced them, had they stopped long enough to reason about the matter, that all the gods of their Pantheon had descended in a body to wreak revenge upon them. At that close range, it was not a battle at all, but simply a massacre.

The chief sufferers were the priests, themselves. Anxious to be in at the finish, they had led the van of the attack, with the result that they had borne the full shock of the deadly impact of bullets. The majority of them were slain before they had a chance to beat a retreat. The balance of them, how-turned tail as promptly as they were able and ran in a panic-stricken mob down the cavern slope. Nor did they stop in their wild flight until they had disappeared, to the last man, out of the lower valley.

The rest of the adventure is soon told. We quickly transported the survivors of the king's followers and ourselves to the surface. In the days that followed we effaced the evidence of the excavation at the foot of the image on the island. We had resolved to keep secret the story of the wonderful cavern until we could continue the exploration under more favorable circumstances.

Then on one lovely summer day we sailed away from Easter Island, carrying as spoils of our wonderful adventure a much bewildered Phoenician King, some valuable parchments that Silas had managed to salvage, and a few knocks and bruises. Just what the ancient dwellers of the cavern may be doing or how they account for the mysterious strangers who came briefly into their midst, I cannot imagine. But this I do know, I bless the day when we chanced upon that queer manuscript, that led me to find the dearest wife on earth!

THE END

their certain death. Their rigid bodies were not broken, showing that the fall had been relatively gentle.

Suddenly an excited voice rattled the radio diaphragm in Lieutenant Strickland's helmet:

"For Pluto's sake, Gentlemen, come and see what I found!"

Strickland recognized a standard "hornet", split open but otherwise uninjured. Its serrated ram had struck the battleship in one of its few vulnerable parts, the flexible bushing of a hazel ray projector. The ram had penetrated it, caught, and dragged the little ship to destruction with the big one.

Starkly revealed in the glaring reflection of sunlight on a nearby rock was Henderson, still at the controls. His lean face was set and frozen in an expression of exaltation. So had he looked in that moment of blind self-sacrifice when he had retreated far into space to gain momentum for his last, desperate plunge—the forlorn hope that had won the battle.

On the floor of the little ship, his massive legs bowed and every rigidly frozen muscle tense, his ears pointed wickedly, his ugly face set in a soundless snarl of battle-lust, stood Hank, the bulldog—his face to the enemy as he went out—which is not required by the Regulations but is clearly understood by those who know the Code.

THE END.

What is Your Knowledge of Science?

Test Yourself by This Questionnaire

1. How could one see the past history of the earth? (Page 491)

2. What is the distinctive feature of the Diesel airplane engine? (Page 517)

3. What would be the purpose of a "radio ear" applied to aircraft? (Page 520)

4. What is the "balance of nature" and how is it preserved? (Page 526)

5. How many descendants would an oyster have by the fourth generation if all the embryos lived? Why does not this happen? Page 527)

6. Where is Easter Island? What is there about it that is provocative of controversy? (Page 546)

7. What is the surface of Eros like? (Page 573)

8. What was the limit of the social organization of the Piltdown men? Why? (Page 583)

Science Questions and Answers

THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited we cannot undertake to answer more than three question for each letter. The flood of correspondence received makes it impractical, also to print answers as soon as we receive questions. However, questions of general interest will receive careful attention.

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These nationally-known educators pass upon the scientific principles of all stories.

Two Atomic Theories

Editor, Science Questions and Answers:

Will you please answer the following questions:

1. How long does it take the sun to make one revolution on its axis?

2. At what speed and toward what star is the sun moving?

3. What is the generally accepted atomic theory and who made it?

H. G. Hoernlein, Jr.
2504 E. Madison Street,
Baltimore, Md.

(1. From observation of sun spots, the calculated period of revolution of the sun is about 26 days.

2. The sun is moving toward the star Vega at a speed of about 13 miles per second.

3. Two atomic theories hold sway, that of Bohr and that of Schrodinger. The Bohr theory, which is the older, postulates that the atom is composed of minute particles of matter carrying electrical charges. The electrons carry negative charges and the protons positive. The atom is composed of a nucleus containing both protons and electrons, but with an excess of protons. Therefore the nucleus carries a positive charge. Surrounding the nucleus and rotating about it in orbits at tremendous speeds are the free electrons; and there are enough of them to balance the excess of protons in the nucleus.

The Schrodinger theory which seems almost sure to displace the Bohr theory, does not allow for actual bits of material, however minute. The Schrodinger atom has the nucleus surrounded by electrical waves in just the orbits that Bohr has filled with material electrons. These electric waves result from the electric charges of the atom fluctuating from time to time, and thus producing a wave motion. It is admitted that the Schrodinger theory is quite difficult to explain, and further although it explains some phenomena more satisfactorily than the Bohr theory, it is not beyond correction or revision.—Editor.)

Coolidge Tube and X-Ray

Editor, Science Questions and Answers:

Please answer the following questions:

1. What is the difference between the Coolidge tube and the other X-ray tubes? How are cathode rays produced, and of what are they composed?

2. Do Venus and Mars revolve to make day and night?

3. How is it that rocket propelled machines operate better in a vacuum? I understood that the explosion pushes on the air, propelling the machine forward.

James Rigbey
Dryden, Ontario

(1. The chief difference between the Coolidge and the ordinary X-Ray tube is in the voltage used. Dr. Coolidge has used as high as 1,000,000 volts in his vacuum tube to get a terrific bombardment of electrons on the anti-cathode or target. By reason of this, the rays emitted by the Coolidge tube are much shorter than the X-Rays and therefore have a much greater penetrating power. Naturally, in using such a high voltage, Coolidge had to devise a special target, so that it could stand the extraordinarily high bombardment. In principle, however, the two tubes are the same. Both operate by having a tube exhausted of air and a voltage impressed on the external circuit. The negative terminal in the circuit, or cathode, shoots electrons through the tube to the positive terminal or anode. Great numbers of the electrons which are the true "cathode ray," hit the anti-cathode or target and are reflected; while the short rays emitted by the target are in the nature of light of very short wave length.

2. Nothing definite is known of the period of rotation of Venus, inasmuch as the cloud masses on its surface make observation impossible. Estimates have been made of the period of rotation on its axis, ranging from 24 terrestrial hours to over one terrestrial year. Mars' period of rotation, or the Martian day is 24 hours and 37 minutes, or just a few minutes longer than the terrestrial day.

3. The rocket acts best in a vacuum because, although in a vacuum the power obtained at the tail is somewhat less than in air, the reduction of head resistance in a vacuum more than overbalances this. The explosions in a rocket do not have to press on the air; the whole power is obtained within the rocket tube by reaction from the gases ejected.—Editor.)

Hit Him in the Back

Editor, Science Questions and Answers:

I hope you will answer the following question.

I once read a story in which the villain (on the highest mountain of the moon), fires a bullet at his enemies on another mountain. The speed of the bullet was so great however that it *traveled completely around the moon and hit him in the back killing him.*

Now the question is this:

Could a person duplicate this on the earth if he were on top of Mt. Everest, had a gun sufficiently powerful, and a bullet that could stand the friction?

Walter O'Brien,
6 Hageman Pl.
W. New York, N. J.

Showing the effect of shots fired from a high peak at various velocities. Shots a,b,c, and d describe a parabolic course and fall back to earth eventually. Shot e has such a great velocity that it does not return to earth but circles it continually. Shot f fired with a still greater velocity escapes from the earth's attraction and goes shooting off into space.

(1. Ordinarily when a projectile is fired parallel to the surface of the earth it tends to drop toward the earth just the same as any other body that is in the air. So in the first second our projectile would descend 16 feet toward the earth, in the second second it would fall 48 feet or a total of 64 feet. In the meantime because of the earth's curvature, its surface has fallen so that the bullet does not actually get 64 feet closer to the surface. At the end of the third second the body would have fallen 144 feet, and so on. Now, if the body falls faster than the surface of the earth falls away from it, it will soon reach the surface of the earth or "fall." But suppose the horizontal velocity of the body is so great that as it travels parallel to the surface of the earth for each 16 feet that the body drops the earth's surface drops just that much. Then theoretically the bullet will always remain the same distance above the earth's surface. It will travel around the earth in a circle and theoretically come back to its starting point. This is disregarding air resistance and any irregularity of the earth's surface. The speed necessary for such a feat would be about five miles per second. At a speed less than this the body will fall back to earth. At a greater speed it will escape forever from the earth. The accompanying illustration will make this clear. Naturally the story referred to makes use of this theoretical principle. No shot in practice could be fired 25,000 miles with such accuracy that it would hit as small an object as a man.—Editor.)

Gravity on Neptune

Editor, Science Questions and Answers:

In Henrik Dahl Juve's "Monsters of Neptune" in the *SUMMER QUARTERLY*, I notice that the gravity on the surface of that planet is assumed to be about the same as it is on earth. How come? I understand that Neptune weighs about 18 times as much as the earth. Will you please explain?

George Willner
Sunnyside, Long Island, N. Y.

(More than one of our readers have been perplexed by the statement that the weight of an object on Neptune is similar to its weight on the earth; since they know that Neptune is much larger and heavier than the earth. However, the explanation is simple, if we do a little figuring. The gravitational pull of a round body, such as a star or planet, upon any other similar mass varies as the product of the masses divided by the square of the distance between their centers. When we are dealing with an object as small as a human body, or even a space ship, we may disregard its shape and size in the calculation; and figure solely on the basis of the mass and diameter of the larger body.

The mass of Neptune is calculated to be about seventeen times that of the earth; while its diameter is about 4.4 times as great. If Neptune were of the same diameter as the earth, and of its present mass, an object on its surface would weigh 17 times as much as it does on the surface of the earth. But, since the surface of Neptune is so much further from its center, that pull is reduced by the "square law" to little more than a twentieth of what its mass alone would suggest. In other words, the pull of gravity it little more, and possibly less, on Neptune than it is on the earth. (17 divided by 4.4 squared, equals .90 of the gravity of earth.)

Let us take another example—the sun. Its mass is 332,000 times that of the earth, but its volume is 1,300,000 times that of the earth. If the sun were concentrated into a ball of planetary proportions—as some of the "dwarf" stars are supposed to be—of the size of the earth, gravity at its surface would be 332,000 times as great as on the earth. A 150-pound body at the surface of such a star would weigh 249,000 tons. But, since the radius of the sun is 110 times that of the earth, to get the ratio of gravity at its surface we divide 332,000 by 110x110. The re-

(*Continued on Page 612*)

IN this department we shall publish every month your opinions. After all, this is your magazine and it is edited for you. If we fall down on the choice of our stories, or if the editorial board slips up occasionally, it is up to you to voice your opinion. It makes no difference whether your letter is complimentary, critical, or whether it contains a good old-fashioned brick bat. All are equally welcome. All of your letters, as much as space will allow, will be published here for the benefit of all. Due to the large influx of mail, no communications to this department are answered individually unless 25c in stamps to cover time and postage is remitted.

Will End the War

Editor, WONDER STORIES:

I have just had the pleasure of reading the June number of your magazine *WONDER STORIES.*

It is the first magazine of its kind I have read, and, "up to a point," I enjoyed it.

Usually when receiving a batch of books or magazines from "Home" (England), I pick out just one or two stories to read, and then pass the lot on, for (as I think you will admit yourself), the majority of present day magazines have what are termed "fill up stories." These latter not only "fill up," but, (from a reader's point of view), "feed up."

And, to state the truth, when I first saw the cover of your magazine, *that* nearly got "passed on."

However, both my dog and I "stopped blinking" after a while, and "chanced the contents." Now, I am pleased I did, and I may add, also the dog—he's had a longer rest than usual.

But my dear good sir, whyever do you agonize your readers to the extent of two serials monthly? One, if you must, but two—never!

I see the reason now why Our American Cousins always have a "Move On"; previously I had thought it was due to the "Monthly Instalment System," but now I can see it is really due to being on edge for the next month's issues of American magazines.

However, though you only gave us four complete stories, and pages of "Gug," after having read them (and the serials and the "Gup")—I am so taken up with the whole lot that, though it will give me a "Pain in the Pocket" for the rest of the month, I am sending £1 on. Kindly do the needful, Mr. Editor, in working out the "Exchange," — and hurry the books along each month

P. S. If you hear of the "War" ending suddenly up here, you will know I have managed to leave the cover of your magazine in full view of the Tribesmen —we can never catch them up when they start to run.

A. Head, Staff Sergeant
In charge Ordnance Depot,
Bannu Waziristan,
North India.

(This letter from far-off India tickles us. It makes us feel "swell" as the expression goes, to learn that we are known and liked even across the world. After all, Sgt. Head must give Americans credit. If, in spite of their hurry and bustle, they can wait a month for the finish to a thrilling story, it means that they are patient. We would feel rather embarrassed, though, to learn that our magazines were involved in international politics. Let's hear from you again, sergeant. —*Editor*)

Need Not Worry About the Occult

Editor, WONDER STORIES:

To begin with I feel like registering a most powerful kick, but on second thought I think that I will praise you first and come with the kick later on. I have read every number of *WONDER STORIES* and I do never get tired of them but always long for the next number. The same thing was true of your former magazine, but since you became editor of *WONDER STORIES* I transferred my loyalty to it. It is stated so often by others that not all of your stories are as good as, for instance, Dr. Keller's, I agree to a certain extent. I am like the gentleman from Kentucky who, during pre-Volstead days, answered a critic that there are no poor grades of whiskey, but that there are better and better grades. And so with your stories None of them are poor but some are better and many are masterpieces.

Among stories that I like best are, first, interplanetary stories, second, stories of the future, and third, stories based on biology such as Dr. Keller's.

Nearly the whole earth is now explored. There is no more in that direction for the daring to do except to fill in details. But there is the SOLAR SYSTEM with its mysterious planets and moons Only the thought of that is enough to whet the curiosity and to fire the daring of any future explorer. If only the menace of the meteors can be overcome I am confident that interplanetary travel will be a fact sooner than many believe.

I would like to see more stories based upon biology. Here is an immense field. The mechanism of our bodies is so wonderful that, even from the admitted incomplete knowledge now possessed, there ought to be almost unlimited opportunities for many Dr Keller's. The same thing goes for psychology. We need not worry about the so-called occult It may be all right in its proper sphere. But it has been so much connected with cranks and charlatans that it has acquired a bad odor. Religion should be left out as it has been so wisely in your stories. Those who find consolation in religion will never be satisfied with any substitute.

And now for the so-called kick.

I am sorry to see that you have left out your very excellent synopsis of scientific news. It did not take up very much space. Still it gave us a very good bird's-eye view of the doings of the scientists I have an old and very intelligent friend who continually reproached me for wasting my time on your magazine. Why not read the facts themselves, he asked. In vain I tried to explain to him he could find science in stories that were based upon such facts. He would not even condescend to look through a magazine of fiction. But then I showed him a number of *WONDER STORIES* with its Science News department and he became interested at once and began to look over some of the stories and found that they were different and not "moron literature" as he first called it. Now, I suppose he thinks that it was in order to placate the morons that this department was left out.

The foregoing kick also applies to your change of name for your magazine. Many people, who, like my friend, do not read fiction at all because they are nauseated with the miserable trash that abounds on the news-stands, would stop and look at the word SCIENCE. If they still doubt a demonstration like the one I gave would be sufficient in the majority of cases to break down their prejudices. I flatter myself that your readers are as a class above the average of fiction readers. Why cater to others, unless you are a missionary?

These are merely my opinions and I offer them for what they are worth. I shall continue to defend *WONDER STORIES* under any title and against all comers so long as its present quality remains unchanged. The only thing I am sorry about now is that owing to my roving nature I must be a news stand reader. May you continue to prosper.

Arthur Johnson
Rt. 3, Box 127,
Hayward, Cal.

(In response to the demand of our readers for more stories, we are trying the experiment of devoting more of the space in our magazine to fiction. In other words, we want to give as much space as possible to the actual stories, and see how our readers like that. We think Mr. Johnson is unfair to criticise as morons, those who want many and good stories. People read not only for education and stimulation but for relaxation. And surely Presidents Roosevelt and Wilson

(*Continued on Page 612*)

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SCIENCE QUESTIONS AND ANSWERS

(Continued from Page 609)

suit shows that the gravity at the sun's surface is only about 28 times that on the earth's surface.

It is rather interesting to note that the gravity at our earth's surface is practically equal to that on any of the larger planets except Jupiter. While Saturn has more than seven hundred times our volume, and nearly a hundred times our mass, the force of gravity at his surface is only a little more than that on the earth.

This fact is rather instructive. It would seem to indicate that what we see of the outer planets is only their envelope of gases; and, beyond a point where their gravitational pull falls to about four fifths that of the earth, it is impossible for them to retain gas. The size of the visible cloud envelope of an outer planet has therefore a natural limit, depending on the mass of the unseen planet below. Of course, if there is a solid surface somewhere below the clouds, gravity is stronger on its surface than at the cloud level hundreds of miles above. It is strongly doubted whether Saturn, for instance, which is much lighter than its corresponding bulk of water, contains any solid core at all.—Editor.)

THE READER SPEAKS

Continued from Page 610

could not be called morons because in their moments of leisure they read detective stories.

We are missionaries. Our science fiction campaign in the Quarterly, we hope, proved that. After being the initiator of science fiction in America, and publishing stories for twenty-odd years, "we" feel that we have more than a merely monetary interest in it. It is "our" child and we want to see it grow and prosper. And we will not be satisfied until we can number the readers of science fiction in the millions instead of the hundreds of thousands.—*Editor.*)

His Unquestioned Superiors

Editor, WONDER STORIES:

Into the world of scientific fiction there sprang from the ranks of unknown authors a genius: the incomparable A. Merritt. Then, like a meteor into the wake of A. Merritt, an author whose staggering imagination is undreamable suddenly followed; he is Jack Williamson. And now, from a center of the universe in which lies all imagination, two inspired authors, Zagat and Schachner, have risen supreme with a superiority that is undisputed. For to read their "20,000 A. D." is to glimpse a vision of the unthinkable science of the future, of an age whose civilization is so much greater than ours that our shuddering senses reel before its implication.

Merritt, Williamson, Zagat and Schachner—these four, by conceiving new concepts, new sciences and civilizations, have done much, indeed, to elevate the standard of science fiction where it rightfully belongs: on the highest pinnacle of aesthetic literature.

When first I conceived the unthinkably stupendous hypotheses for such wondrous stories as my own "Star-Riders," and "A Free-lance of the Galaxy," I believed I had achieved the most colossal feat of imagination; but on reading "In 20,000 A. D.!" I recognize my unquestioned superiors!

Bernard J. Kenton
416 Frankford Ave.,
Cleveland, Ohio.

(In our opinion Mr. Kenton does not overrate Messrs. Schachner and Zagat. In many cases, collaboration in the writing of stories does not work out well. But in two cases in particular it has met with great success. We refer to that of Manning and Pratt, and Schachner and Zagat. In both teams as far as our personal knowledge of the gentlemen goes, the members each have the qualities that the other lacks, and so on each story we get two minds working, and the benefit of two points of view.

Messrs. Schachner and Zagat had indicated that a sequel might be forthcoming soon; meanwhile they have another story in prospect with a theme as wonderful as that in "20,000 A. D."—*Editor.*)

THE READER SPEAKS

At Last! At Last!

Editor, WONDER STORIES:

At last, at last! Now the gods be praised, the editors are giving me what I and what I think everybody else wants, a sensibly-sized magazine. You know, Mr. Editor, you don't have to carry a magazine round as we readers do, you don't have to read it going to and from work in crowded street cars, in overloaded buses and trolleys, in mobbed lunch rooms. What chance did WONDER STORIES have in our crowds, with its encyclopedic dimensions! Now every morning into my side pocket it goes, and I can read it, READ IT you hear, without having my eyes wobble all over a page the size of a billboard sign.

My fervent, my deep felt blessings, Oh Editor. At last! At last!

Morris Glassberg,
3840 Grand Concourse
New York

(We didn't think that our change would elicit such a deep sign of thanksgiving as that coming from Mr. Glassberg, but we are naturally glad. We note thirty-six letters in this morning's mail on the change. Twenty-three express unqualified approval, five express disapproval and eight are willing to try it out. If the proportions continue to run the same, we will feel that the experiment has been a complete success. For we know that the eight will become convinced that our move has been a good one.—*Editor*)

New Authors For Old

Editor, WONDER STORIES:

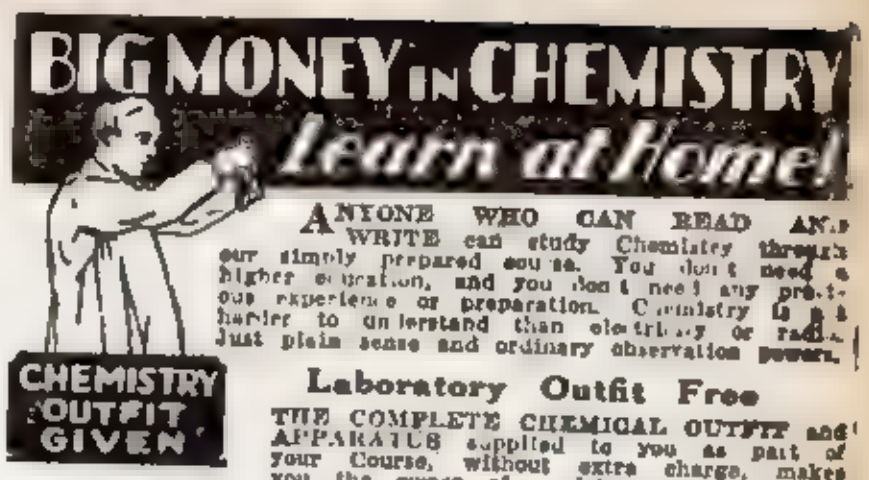
A little of the usual oil. I have been one of your readers since the magazine was first published or rather when it was two magazines. I have on hand practically all copies of both issues too. I get a barrel of fun out of going over some of the past stories and comparing them with the current run of your stories. It is sometimes real interesting to compare them. I read everything from the front cover design to the advertisements on the last page. Some stories I don't like. Some are mediocre, others are excellent—but why give my list of the "All-American Ten," when some other bug will turn around and tell me I don't know what I'm talking about, that this or that author is the better. I read your magazines because I have an imagination and it needs exercise. A man without an imagination to my notion is out of luck. I am also what might be termed "scientific minded," getting a kick out of any and everything bordering on the unreal and a little far-fetched—as far as the present is concerned.

I want to hand out a brick bat to Mr. Herbert Fixler of Jamaica, N. Y. In his comments in "The Reader Speaks" of the September issue, he listed the last part of his letter as general comments. He would have been better off to have ended his letter right there. What he thinks won't change my mind about our publication one iota—but this is one time I can't quite swallow hook, line and sinker. He likes WONDER STORIES, but to cut out the science. Get this You are *trying* to publish a fiction magazine, not a text book. You are certainly *doing* it I might add—not *trying* to. If he can do any better perhaps he might be interested in your job as editor You publish WONDER STORIES with the expectation of giving us readers that kind of material. Show me a "WONDER STORY" that does not border on the scientific! If he don't like science, why don't he stop reading it and read something more sensational as published in other magazines. I would be very much interested to learn just what kind of stories Mr. Fixler does like.

He says bring back some of the good writers such as Cummings, Merritt, Verrill, etc., but to cut out such as Repp, Dahl, Juve, etc., whose stories all have the same fundamental plot. I want to say that I have read about as much and about as many different books, magazines as any one else even though I am a baker by trade, and I have yet to find two stories by different authors that had the same fundamental plot!

Of course to read the stories a mile-a-minute one would think so. But to read these different stories intelligently, conscientiously, and with an open mind to receive such plots and ideas that the author had in mind when he wrote the story, brings to light a totally different state of affairs. I dare say Mr. Fix-

(*Continued on Page 614*)



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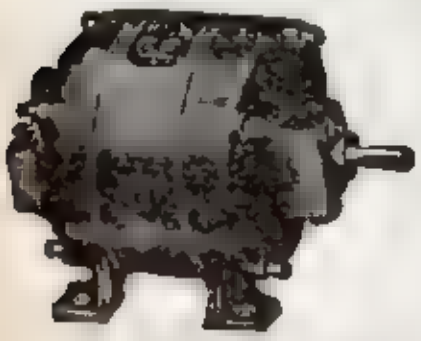

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THE READER SPEAKS

Continued from Page 613

ler knows all about a plot, the climax to a story, etc. He likes Cummings, Merritt and Verrill, but he doesn't like any science. Where is a story by these authors that hasn't any science in it! I have read about all these authors have written and they all would make good material for WONDER STORIES. I admire you Mr. Editor for publishing the worst comments along with the best but I do think this reader's comments were not justified and have no place among the real brickbats and bouquets of these columns.

I say give these new authors a chance. Who is going to take their place when they are called beyond? How are we going to continue to have good stories if new authors are not given a chance to make good. Of course most of the older (in experience) writers are good but why not—they have been at it long enough to really write about things they are most adept in. Twenty years from now all these writers may not be writing. A magazine can't be good without good authors and if new material is not given a fair chance most of us are going to die with the leisure we formerly put in on reading. A mediocre story by a comparatively new author is better to read, than a good story by an older writer. Why? Because we expect more of the older author and if we have read several real good stories by him we are inclined to be more broadminded when reading him. We are very critical with the newer one, though, and pounce upon him for each little mistake he may make. I am not an author, neither am I a writer. But in my work I come into contact with fellows who are new and inexperienced in the work expected of them. Who can say right away whether or not they will make good the very first time they try. I dont' believe it is justice to judge anyone until he has proven himself totally incapable.

Keep up the good work—and readers who can appreciate your efforts in making this the mag that it has become so far, will be satisfied. There is only one thing I don't like about this magazine. There should be twice as many stories and a magazine twice as large. As I said before, (no offence) I am a hog for punishment. Count me in at the finish 'cause I'm sure going to stick.

Edwin E. Maust,
812 Coburn Ave.,
Morgantown, W. Va.

(Mr. Maust has one important thing to say in his letter. The progressive editor (and who can publish science fiction and not be progressive!) is constantly on the lookout for new authors who have something new to say, a new point of view, a new style, a new type of appeal. No two men have the same type of mind, and even tho they are equally intelligent they may both discover different truths. It is the policy of WONDER STORIES to constantly encourage new authors, who have something important to say in their stories. And if we find a youngster who has promise, we will advise, encourage and assist him, knowing that three or four or five years hence we will have the satisfaction of producing a real author.

There is no doubt but that authors do tend after awhile to repeat themselves. We could not be fair and honest without admitting that. But we always exercise the right to reject stories even from one of our best authors when we find he is saying the same thing over and over in different ways. That check, we believe, will eliminate the difficulty that Mr. Fixler complained of. We have never and will never allow writers to go on and on using the same stories. For our magazine is published for our readers and not for the writers.—*Editor*)

The Scientist Who Fell in Love

Editor, WONDER STORIES:

Three cheers for Mr. C. E. Rodgers of Mechanicsburg, Pennsylvania! I have been planning for some time to write a few lines and let you know what I think of your magazine, but the letter of a certain Miss Carmen McCable in the August issue of WONDER STORIES prompted me to write this one.

I realize that there are probably a good many who would rather have more romance and less science, like Miss McCable. But not for me! And I speak for about ten others whom I know personally, and who have read your magazine for some time. As Mr. Rodgers said in his letter, if one wants romance let him buy a magazine which is entirely devoted to that subject. Romance has its place in every story, of course, scientific, or otherwise, but there is such a thing as overdoing it. It is quite all right for the

THE READER SPEAKS

hero of a story to be able to fall in love with a beautiful girl—but, if there is a scientist in the story (as there generally is in this type of story) let him be a cool and calculating individual, a sort of unusual creature. What would one think of a scientist who fell so completely in love that he was unable to pursue his work? Absolutely nothing. Their interest would stop right there.

Miss McCable also raves about inhuman monstrosities. She wonders why the authors write of such things. Evidently our "girl friend" has very little, if any, power of imagination. The stories in WONDER STORIES, as a rule) do not refer to things as they are at the present time, but to things as they shall be in the future, as they are on some other planet, as they are under unusual conditions, etc., (anyway it's something like that). Why does Miss McCable think it unusual that in Dr. Keller's story "The Human Termites" there were ants twenty feet long? Might not such an animal exist under conditions as explained by the author? I got a big kick out of reading this story. I suppose Miss Carmen screeched, screamed, and went on something fierce. Well so much for that.

If Miss McCable doesn't want science in the stories in "our" mag, she shall either have to get better acquainted with it; or buy a magazine which has no science in it (and there are certainly plenty on the market nowadays). She says she is not interested in "How some one is going to go to the moon now or when the sun falls," but what she is interested in is the adventure he goes through after he arrives. Now I think that is a lot of BUNK! A good many of my acquaintances (all of the male sex) take your magazine, and there is not a one among them who does not take it for the sake of getting a scientific education as well as for entertainment.

But, I ask you, what good would we get out of a story which dealt with a scientist who wished to go to Mars, or some other planet, and builds a machine for this purpose. He then steps into the machine, pushes a button, pulls a lever, and presto! he is at his destination. When he gets there he goes through a lot of silly, romantic, (if so it can be called) adventures, then falls in love with the Martian Princess and forgets to return to earth. More bunk! Although I wish to know what happens to the "someone" after he reaches the moon, or wherever it may be, I also am interested in the way he reaches there, what sort of machine he uses, etc.

H. W. Lamton,
Lincoln, Nebraska
R. No. 1.

(The controversy that Miss McCable started by her letter asking for more romance in our stories, waxes fact and furious. The above letter leaves no doubt as to where Mr. Lamton stands. The letter following shows a directly opposed point of view, for Mrs. Elliott is as staunch a supporter of Carmen McCable as Mr. Lamton is a critic.

This, we feel is a controversy that belongs to our readers, so we will not intrude the editorial nose into it. We will stop, look and listen. So we invite further points of view.—*Editor*)

Would Result in Death

Editor, WONDER STORIES:

Concerning Miss Carmen McCable's excellent editorial, and C. K. Rodger's childish outburst: I'm for Carmen, first, last and always. Ten to one the great majority are for her too, with the exception of C. K. who is trying to insinuate that our literary staff are the kind of men who wear pink silk teddy bears trimmed with lace and lavender ribbons. Heaven forbid! Carmen, as her letter reveals, is an unusually bright girl, and it's ten to one that her premature wisdom got C. K.'s goat. As I have stated in previous writings some men suffer with an extreme superiority complex, and heaven help those who cross their path. Especially a mere female.

At Carmen's age I was married, and have since borne five children; yes, actually married to the same man for sixteen years and still love him. Most likely C. K. calls this "slush" too, but thank goodness, I know enough of love and life to put my sons on the right trail. Yet, this fellow harps of Science. Bah! What does he know of Science? In the first place his quite vague intelligence is revealed in his own statement on "necking party" business, and this slush he calls Romance. It is perfectly evident that he has

(*Continued on Page 616*)

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THE READER SPEAKS

Continued from Page 615

not arisen from the low bestial stage, that is vicious to the extreme, and is in no way related to Romance and to the true love. This isn't a thesis, it's a fact. Romance itself is normal, and thereby allied to Science, for without it your Science would cease to exist. Remember Romance leads to marriage, and results in the continuation of the race. True, bestiality is primitive, but Romance and love are not, and reveal in themselves the very elixir of Life.

C. K.'s version of Romance IS slush, and you won't be losing anything if he does drop his subscription. Bear in mind that all decent intelligent men ARE NORMAL, and to create your Scientist as absolutely void of emotion, and without even the vestige of natural desire would NOT RESULT IN THE SUPERMAN BUT IN AN AUTOMATON OF DEATH.

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To change the subject—I'd like to make a suggestion. How about a binder for our WONDER STORIES? Really it would be lovely if you could make a go of it, and most likely would increase the circulation of the magazine. Paul could design a nice durable cover large enough to hold six issues, which I'm sure would look very nice in the book case, and at the same time be profit to you. As you know, the National Geographic Magazine produces one, at two-fifty, I think, and I understand it is very popular among the readers. Anyway, you might put it up to the rest of the folks for their opinion. And here's another suggestion: why not run a story for children sometimes?

Do you realize that a great many boys and girls gloat over Paul's grotesque illustrations because they remind them of the creatures in the land of make-believe. And yet, you wouldn't violate the excellent Science of Wonder Stories for the Goblins could represent the faults and I might say, vices of childhood. Such as Fibs, little imaginary wrongs, hate, and sometimes mean little things that youngsters occasionally do. Candidly, I feel sure that a great many parents would be only *too glad* to subscribe. Think it over. You see, the *Science* would be in the *good moral instilled on the young brain.*

Pearl Hamilton Elliott,
Hempstead, L. I., N. Y.

(Mrs. Elliott as a wife and mother gives us her own view on the romance—cold blooded scientific question. We see that her point of view is just about opposite to that of Mr. Lamion's. As we stated above, this is a controversy we leave in the hands of our readers.

THE READER SPEAKS

The ideas for the binder, and the children's magazine are interesting and we will give them consideration. Of course, the children's stories could not be published in *WONDER STORIES* for "our" magazine must take a more mature point of view. But as a basis for a magazine to be devoted exclusively to Children's stories it sounds interesting.—*Editor.*)

Some Comments on the Change in Size

My main reason for this letter is your announcement of change in size. Am glad, as this is a very great and needed improvement.....

A. H. Bailes,
4009 Holly Street,
Kansas City, Mo.

Am greatly surprised when I read the announcement about changing the size. Did you have to do it while a serial was running? What are my friends going to do about the "War Lord of Venus"? Oh well, Mr. Gernsback, don't take it too much to heart. Perhaps the new magazine size will be better.....

Julius Schwartz,
407 E. 183rd Street,
New York

I wish to express my heartly approval of the change in size. No doubt some chronic objectors will raise a row, but I assure you it is a great improvement. This change is another indication of the up-to-the-minute policy of the Gernsback publications.

Allen Glasser,
1610 University Ave.,
New York

Recently there has appeared a competitor that obliterates the science but calls their narratives science fiction. Do you intend to lower yourself to the level this magazine has set?

Your discussion column has recently been exemplary of several bitterly antagonistic missives, absolutely scurrilous in their content. Your sense of fair play induced you to print them, but why must you heed this minority. Yet that is precisely what you are doing. The pulp paper standard has long been indicative of what it all too plainly stands for You intend to join the ranks! Your size magazine (as it is at present) has long been indicative of *science* fiction, with the accent on the science.

Why must you heed the vagrant, imbecilic calls of certain depraved morons, who delight in displaying their microscopic intelligence? They cry in alarm because you print fantastic stories, they cringe because you dare have science in these stories. What do they buy the magazine for? They ask for romance, they ask for thrills, they ask for other characteristics. A word to these obviously grammar grade infants. There are innumerable wild west, slush stories, snappy stories, two-gun story magazines on the market to cater to their limited intelligence. Give us science, give us science, and then give us some more science.

But clothe this science in stories that will retain the scientific quality.

Assure me that you will retain your scientific standard as at present set. Assure me that you will retain those little features, "Questions and Answers" column, "The Reader Speaks," short opinions of the stories, portraits of the authors, etc.

Assure me of all that, and I will remain a reader. Otherwise you lose me.

I do not object to the size, but keep the science.

Frank Sicari,
9724 — 101st St.,
Ozone Park, N. Y.

(Our answer to Mr Sicari is that WE WILL NOT CHANGE THE CONTENTS OF WONDER STORIES. Our readers have assured us that we are giving them what they want, and this we will continue to give them. We believe that the "Question and Answers" columns (which by the way are *enlarged* in this issue, the free and open "Reader Speaks" department, the comments on stories; pictures of authors, as well as the more intelligent level of our stories are things that set WONDER STORIES apart. We assure all of our readers that we will continue to give them the things that have made WONDER STORIES far and away the leading science fiction magazine in the world. Need we say more?—*Editor*)

(*Continued on Page* 618)

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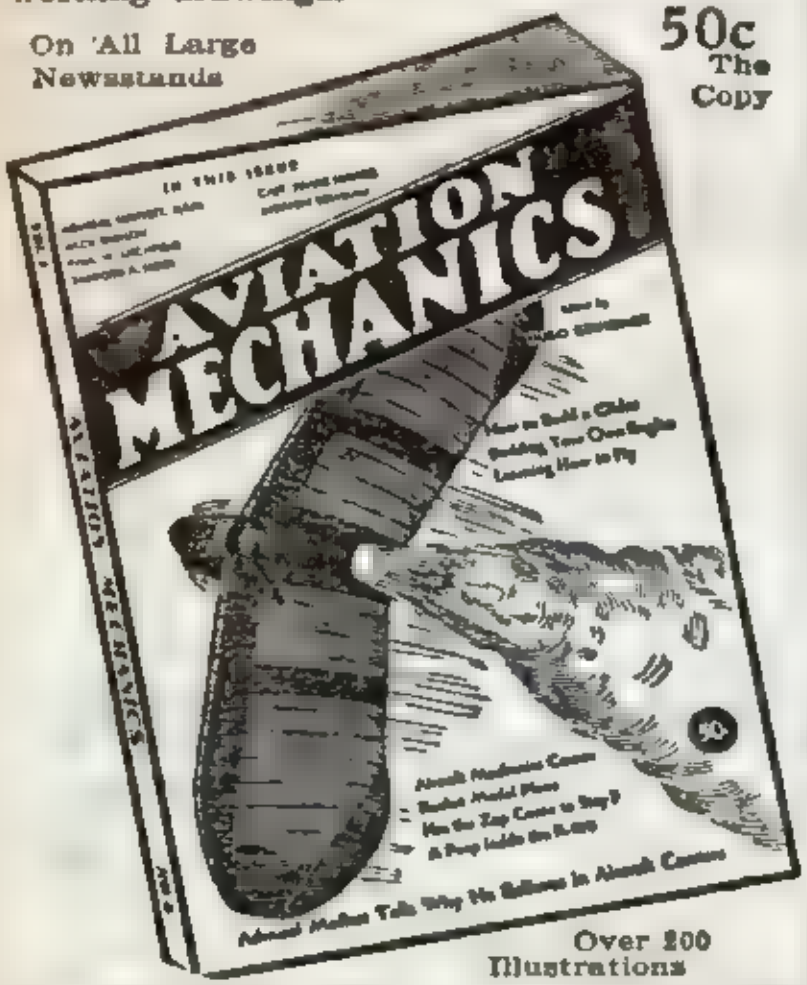

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THE READER SPEAKS

Continued from Page 617

Some months have passed since last I cluttered your desk with my literary efforts, and I am now going to waste some more of your time. I am driven to this by a few (in my opinion) objectionable occurrences. The first of these is the insulting of the intelligence of most of us by publishing the weak minded ravings of a few crabs and impeches and sap-headed kids. I am referring to the letters of Booth Cody, who certainly spoke out of his turn; and of John B. Carter, who made things worse with his puerile remarks. And that is all I have to say concerning the above, as it is really none of my business.

Allow me to congratulate you on the September and October covers: they are the best since the inception of the magazine. Also, I am elated over the promised change in size, as the present shape is entirely too bulky. That is enough concerning the technicalities of the magazine.

I think you are deserving of some praise for introducing so many new writers. While many of them lack experience, still the majority are very good. A few years ago I should have scoffed if told that mere boys could turn out stories as good as the offerings of your young authors. However, I do believe that there is one thing they should be very careful about: and that is "human interest". A tale without human interest is not worth the reading, no matter how much flawless science it contains. Although I write a bit myself, and have had a dozen or so stories published, still I don't think I am capable of giving any advice to others; but I will give one little hint, and that is that a good course in short story writing (such as many colleges offer at small expense) would prove very helpful. Having finished with the writers, let us turn to the readers. Any person who can pan the "Marble Virgin", which was one of the few stories with human interest, while praising the many scientific monstrosities that occasionally appear, is no judge of fiction.

With regards to my good friends in the *Amateur Scientific Club* and thanks for your kind attention, I will now close with my best wishes.

H. G. Owen,
4947 N. Troy St.,
Chicago, Ill.

When Anger Weakens the Heart

Editor, WONDER STORIES:

I will now take my turn at telling you how to ruin your magazine.

1. Scientists say that anger weakens the heart and shortens life. If that is true, those persons who are always thinking up a lot of lies to take up space in the discussions column are practically killing me right now. I did not read Mr. Cody's letter but I have read others which do not vary enough to cause any more or less disturbance.

After reading John B. Carter's letter to Mr. Cody I come to the conclusion that he means to be offensive. I also conclude it's a good thing there's a whole continent between the two gentry.

2. You should publish a few pages of the trials and troubles of the Editor, and a standing offer to anyone who thinks they can run the magazine any better to come and try it.

3. You should hire Mr. Carter to write notes at the end of all crank letters. (Mr. Carter's eloquence deserves recognition.)

4. Most important of all you should not let me take up your time.

Loyally and entirely yours,

Field Wetherbee,
Route 4,
Corvallis, Oregon

(Young Mr. Wetherbee is right. Modern man is digging his grave with the spade of his anger and perpetual anxieties. Centenarians are people who have preserved life because they had calm, and even sunny dispositions. We can say this for Mr. Carter: he never rose to anger. Perhaps he will live long. But young Mr. Weatherbee who is only 14 years old, gives advice that much older readers should heed. —*Editor*)

Jim Vanny Acknowledges

Editor, WONDER STORIES,

In your 'Reader Speaks' column of the October issue you publish an exceedingly courteous and well thought criticism on my story, "The Radium Master".

THE READER SPEAKS

I am afraid I did not dwell enough in detail on the motors of the airplanes when I called them "Diesel" engines. Perhaps this was because I was so absorbed in the radium technicalities of the story. My idea of the motors was rather more like Mr. Jones mentioned in the latter part of his letter where he says: "In the future, of course, engines may burn electrically ignited fuel oil, which is the fuel the Diesel burns." It was my idea to use such fuel in the engines to increase flying range. Such fuel would, of course, reduce the fire hazard also for it is not as combustible as gasoline even in the presence of an electrical ignition system. With the idea of the oil burner in mind I inadvertently called the engines "Diesel" when I should have coined another name for them.

I appreciate Mr. Jones' criticism as it was helpful and constructive. Such criticism is always welcome.

Jim Vanny,
815 S. Los Robles Ave.,
Pasadena, California.

(Here is an example of criticism of the highest type, Mr. Jones points out an error, but does it without rancor or anger. The author acknowledges it and expresses his appreciation. Long may "constructive criticism" wave!—*Editor*)

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Progress of the Scienceers

Editor, WONDER STORIES:

During the past few months The Scienceers have achieved two noteworthy objects—the publication of a monthly paper and the establishment of branches of the main organization.

The club paper, called *The Planet*, is devoted to the interests of science fiction fans. It contains articles, poems and sketches of a scientific nature contributed by the members.

The first active branch of The Scienceers was recently founded in Clearwater, Florida. Anyone in that vicinity wishing to join this branch should communicate with its president. Carlton Abernathy, P. O. Box 584, Clearwater. A second local group sponsored by The Scienceers is being organized in Brooklyn, N. Y., by Louis Wentzler, of No. 1938 Woodbine Street, who will welcome cooperation from other Brooklynites.

For those readers who may be unfamiliar with The Scienceers, a few words concerning its nature and activities would not be amiss. The organization was founded almost a year ago in order to provide a common meeting-ground for lovers of science fiction, where all phases of this fascinating type of literature may be discussed and commented upon. Meetings are

(*Continued on Page* 620)

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THE READER SPEAKS

Continued from Page 619

held every Saturday night at No. 266 Van Cortlandt Avenue, near Mosholu Parkway, Bronx, New York. Visitors are always welcome.

Any reader of this magazine wishing to form a branch of The Scienceers in his community should write to the undersigned, who will furnish all necessary information.

Allen Glasser, Secretary,
1610 University Avenue,
New York, N. Y.

(We recommend to our readers a careful consideration of the Scienceers. We believe that these young men are doing some excellent work in the spreading of information on science, and, from what we know, they all seem to be having a good time at it. Best of luck, Scienceers, may you always be true to your name.—*Editor.*)

The Monthly Barrage

Editor, WONDER STORIES:

The monthly barrage begins! Or has it already begun! I am glad to see you are going to reduce the area of your magazine. It used to be so discouraging to find oneself in the middle of a boring story and reflect upon the drivel that must be plowed through before one could turn to the next page. Now that you have seen your way to conforming to the general magazine standard as far as size is concerned, maybe you'll even be wise enough to snap up the most popular authors in this field, Ray Cummings and Murray Leinster. I won't discuss the magazine as a whole any further except to say that the latest issue was the best in a long time.

"Marooned in Andromeda." Good but nothing original. Too many narrow escapes and lucky breaks. It is not science-fiction. You are slipping.

"Lizard Men of Buh-Lo." Poor. Flagg has no excuse for defending science fiction or patting himself on the back in the story. It destroys the charm and brings the reader down to earth. Flagg makes a mistake in having the characters converse by signs. The hero could not possibly translate the lizard sign language as perfectly as he does without living among the people for a long time. You can't guess what name a person is signing with his fingers. The story was rotten, impossible, and hackneyed in plot. A disgrace.

"The Empire in the Sky." Good, the first Atlantis story that I could wade through, but I still want to know how we can presuppose that the Atlanteans are so far ahead of us. There is no shred of evidence to support the theory yet I have never seen an Atlantis story that failed to agree with it.

"The City on the Cloud." Fine, an oasis in the desert of hackneyed plots. Stories like this restore my faith in science fiction.

"Faster than Light." Passable.

"The Man Who Laughs." Another gem, better than most robot stories in that the robot is shown to have some limitations.

"War Lord of Venus." Fine, sounds like E. R. Burroughs. Hero better carry some smelling salts next time. Faints too often. Too many close shaves. There is one minor mistake. The author says that the hero gripped the arrow between his thumb and forefinger to draw it back. That method is incorrect. The three middle fingers of the right hand should hook the string, the arrow resting lightly between the forefinger and the next. If the arrow is "pinched" as the author described it, it will slip out of the archer's hands if the bow is at all powerful. With the "loose" that I have described, the archer has a firm grip on the string and can release it by simply straightening the fingers. I wonder why the author took such pains to describe an incorrect method. This story is not science fiction.

I have noticed that your stories have begun to fall outside the bounds of science fiction but I personally prefer them so. The next sham to get rid of is that board of science editors. They don't pass on the stories and don't try to tell me different.

Philip Waite,
8400 Wayne Avenue,
New York, N. Y.

(Mr. Waite starts the barrage with a sixteen-inch shell, so we must pause to recover from it . . . We don't quite understand his system of criticism. In two stories he uses the term "good" or "fine". At the end of one, he says further, "you are slipping."

THE READER SPEAKS

At the end of the second, he says, "This story is not science fiction." Are we to understand that a "good" or "fine" story means that we are slipping, and that only a "super-fine" is good enough for us? If so, we are happy and will try to conform. Only "super-fines" after this.

With regard to Atlantis, the evidence we have seems to favor, rather than not, the theory that it had a high grade of civilization. Therefore writers are, we think, justified in assuming one of the possibilities. If Atlantis had not a high level of civilization, higher than that prevailing during its period in history, then there would be nothing to write about.—*Editor*)

The 90 and the 10

Editor, WONDER STORIES:

Re. Mrs. Elliott's letter: Am agreeably surprised that Mrs. Elliott still remembers me. Which must be a effort for such a busy person. What I don't understand is what our personal acquaintance and my family has to do with a matter of technical difference of opinion. Or should Mrs. Elliott possess that feminine peculiarity of taking everything in a personal sense? My remark that "90% of the people are just plain tripe" should be cited in its connection. What is tripe? A honest to gosh part of an honest animal and hard working at that. And so are 90% of the people just hardworking cooperating bits of tripe of this animal called Creation. The other 10% fall mostly under the description of malignant growths, cancer cells.

My natural shyness forbids to claim my share of the percentage. I leave that to my friends. As to the question of Religion versus Science, it all depends on who handles it. The honest tripe or the clever 10% that always tried to force their opinions down the throats of the rest.

Religion and ethics are a reality just as much as a chemical reaction and can be studied as such scientifically and will be studied more and more in the future. But anybody who writes about those things without real knowledge and honest effort stands in line with those gentlemen who improve flour with china clay or sell white salve. As to the difficulty of explaining to people the reality of this Occultism and Reincarnation ballyho, well, it took me about 30 minutes to demonstrate the logic and soundness of the theory of reincarnation to a Professor of Engineering at Columbia University and about 5 minutes for the education of prenatal sex control. But I'm afraid it would take years to explain the why and how of such matter to the unscientifically trained.

May I state that I do not belong to any church or creed and haven't been to any religious service since I left school. That in my opinion going to any particular church has nothing to do with anybody's salvation or damnation. That the only thing that matters is whether he belongs to that honest tribe or the clever tribe. That the only safe way is the same in religion as in science: Don't take anything on hearsay, but go out and find out for yourself. And don't go off half-cocked.

As to my reaction on Mrs. Elliott's letter? That lady may be interested to know that she was wrong as usual. On reading her epistle a grin began to spread over my face till the ears began to complain of crowding. And that grin hasn't quite worn off yet after three days.

Now, dear Editor, carry on in running OUR magazine the way you always did, to the best of your ability. And here is one subscriber who will always renew his subscription on time even if he has to hock his watch for it

Frederick C. Hehr,
Jerusalem Avenue,
Hempstead, L. I.

(We understand that Mr. Hehr means by the 10%, those people who neither work nor spin but live on their fellow man. Now that may be right. But in calling them clever and the 90% "hardworking" he gives the impression that the clever are not hard working and honest and that the hardworking and honest are not clever. We are sure he did not mean to give that impression.

Of course the 10% may mean anything. It may mean the aristocrats, the clergy, the politicians, the financial barons, the newspapers, etc. But whatever he meant, he has clarified the air a bit, and now we await the next answer to his letter.—*Editor*)

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AN INTERESTING MESSAGE

on the top of the column on page 620 will prove the few minutes spent in reading it, well worth your while, particularly if your subscription to WONDER STORIES expires with this issue or the next.

BOOK REVIEWS

DEATH VALLEY—The Facts by W. A. Chalfant, 155 pages, stiff cloth covers, illustrated, size 6 x 8½. Published by Standard University Press, Stanford, Cal. Price $3.

Death Valley has existed in fiction and imaginative tales in our literature for some time The extremes of temperature found there, ranging in a year from 134 to 15 degrees, the fact that it is at points several hundred feet below sea level, and the presence of occasional gold mines have all contributed to make of it a fitting locale for dark and dastardly deeds. From the time of the Forty-Niners, who over-ran California in the first mad gold rush, to the present, Death Valley has held an unique place in our national literature.

Mr. Chalfant aims to give us the facts of Death Valley; its geographical features; the climate, the natural resources and plant and animal life

But in order to convey properly the more or less prosaic facts, Mr. Chalfant wisely makes use of all the literature, serious and otherwise, that exists on Death Valley. And much of this is the experiences of men who went into the valley to search for gold, to irrigate, to escape from justice, to fight the Indians.

One of the most interesting stories he tells is of "Scotty's Castle" built by Walter Scott, a one-time cowboy in the Buffalo Bill Wild West Show. It is a true mediaeval castle in almost the heart of the valley. Here fifty-eight miles from all rail connections, the $2,000,000 structure is still in the process of erection. According to Mr. Chalfant's report, the castle will have the best of furnishings and equipment available to a mediaeval baron and a modern financial potentate.

The illustrations are quite numerous and picked with care. They help to convey graphically much of the mystery, terror and charm that has always surrounded Death Valley.

THIRTY FATHOMS DEEP by Commander Edward Ellsberg, 266 pages, stiff cloth covers; illustrated. Size 5¼ x 7¾. Published by Dodd, Mead and Company, New York. Price $2.00.

Commander Ellsberg, noted as a deep-sea diver and author of "On the Bottom," gives us now a new diving story in the form of a cruise in search of buried treasure. Commander Ellsberg brings into play all the skill and knowledge of the man who helped raise the *S*-4 and *S*-51, and adds to that a sense for the romantic and adventurous to construct a thrilling story.

A young Bostonian, Bob Porter, induces his rich uncle to finance an expedition to the South Pacific, off the coast of Peru, and try to salvage the treasure of a Spanish galleon, the *Santa Cruz*, sunk by the English in 1579. Porter's information comes from an old Spanish book picked up on a second-hand book stand.

Under the leadership of Lieutenant Carrol, a crack Navy officer, the expedition sets out, battles with the sea and finally locates the treasure, only to find themselves forced to hold it by fighting against a modern pirate crew.

Though Commander Ellsberg is not a finished story teller, his yarn holds interest throughout and is particularly interesting in showing the fascinating sides of deep sea diving. To those interested in adventures under the sea, the science of it, this book is recommended.

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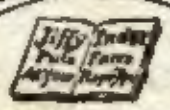

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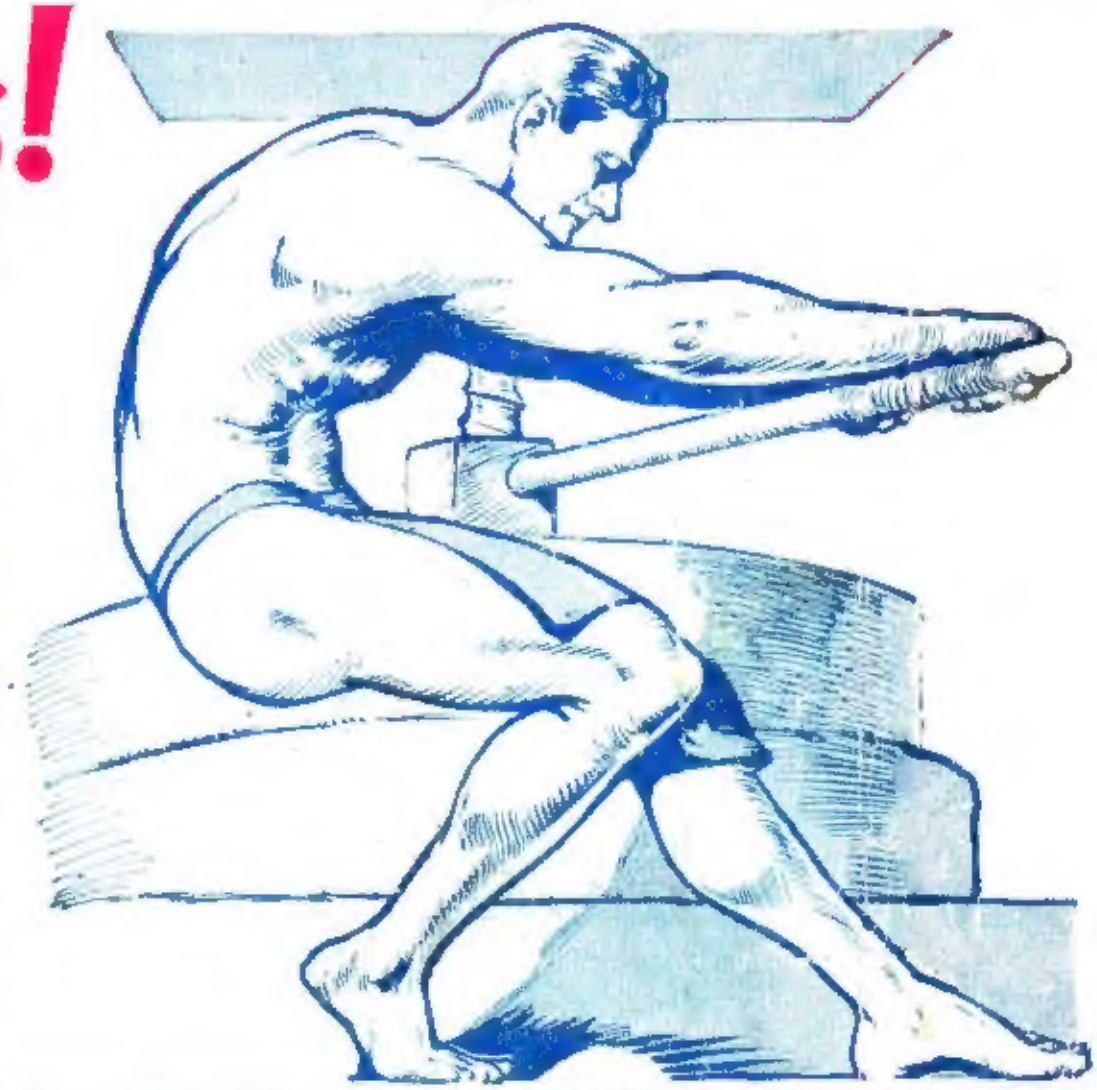

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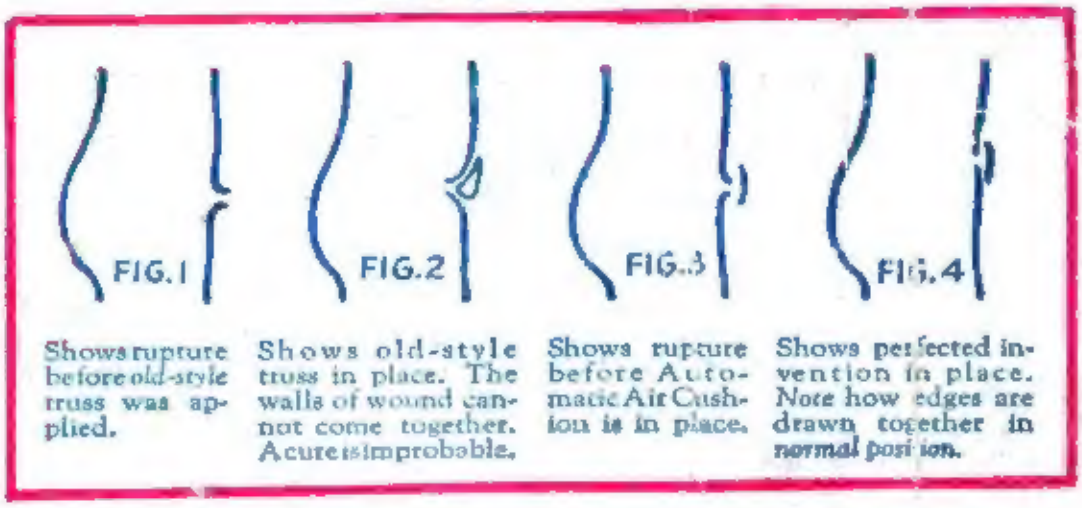

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